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Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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PUBLICATIONS
SEP 17 1930
DETROIT

JULY CAR SALES 2.6% BELOW JUNE

AUSTIN WILL OFFER SPORT MODEL OCT. 1

September Output Is Placed at 5,000 Units

Butler, Pa., Sept. 2.—Production of the sports model of the American Austin automobile will begin about October 1 at the factory here, according to E. J. Leach, works manager. Models being placed on the market are the coupe and light delivery cars.

Manager Leach has fixed the September output of Austins at 5,000. Workers in the plant have been increased to 865, exclusive of the business office force. The assembly line yielded 230 cars August 29, being the record for one day's work.

Orders continue to pour in for the Austin, according to Manager Best of the sales department. The company is filling as rapidly as possible orders for the car which were received prior to the beginning of production.

VALPEY OF GRAHAM POINTING FOR 1931

Detroit, Sept. 2.—After all, this slow period in the automotive industry ought to benefit not only the manufacturers and dealers, but the public as well. This is the belief of F. R. Valpey, general sales manager of the Graham-Paige Motors Corporation. Mr. Valpey, looking over the present situation and peering into the future, has a cheery slant that he is passing along to his fellows in the industry. He feels optimistic as to 1931, and says the dealers who stick will be in a position to profit thereby.

"Dealers who weather the present slow period by reason of intensive sales effort and sane trading will enjoy increased businesh in 1931," declares the Graham-Paige executive. "Having become accustomed to the harder constructive work which has been necessary to offset the slow movement of cars this year, they will profit. Also the fact that they will not be forced to carry excessive stocks and negotiate long trades will be to their advantage.

"Dealers who remain in the picture for 1931 will be the ones who put their business on a sound basis, reduce unnecessary overhead and key up their organizations to go out and more intensively sell the product they represent.

"Next year I believe used car prices will be lower than in 1930 and buyers will not get the appraisals they expected. They will, however, get far greater value in the new car, because of engineering improvements and added features made possible by reduced overhead and production earnings.

"Production next year will be regulated closer to retail demand than at any time in the past. In fact, since last fall motor car manufacturers have scaled down production in line with retail sales and are not burdening dealers with heavy car stocks.

WILLYS-OVERLAND PLANT REOPENS WEEK AHEAD; INCREASES EMPLOYMENT

Toledo, Sept. 2.—The Willys-Overland Company is now employing about 6,500 workers on a five-day week, as compared with the same number working four days a week last month.

The Toledo plant was to have been shut down ten days for inventory but it was reopened this morning, since the inventory was completed over the three-day holiday. Excellent driveaways of the improved Whippets have been made during the last few weeks, particularly by dealers in the Pittsburgh area.

UNIVERSAL CREDIT FINANCING OF FORDS PASSES $500,000,000

Detroit, Sept. 2.—Since it started operations on January 1, 1928, the Universal Credit Company reports that its volume of business in the financing of Ford cars and trucks passed the $500,000,000 mark today. Its monthly volume of business during August, usually one of the smallest months of the year, was at the rate of $25,000,000, or approximately $1,000,000 for every working day.

The company estimates that it has saved purchasers of Ford products approximately $35,000,000 since it began operations. It now has thirty-two branches in operation in the United States and Canada.

PRODUCTION OF BUICKS IN AUGUST UP SHARPLY

Detroit, Sept. 2.—Production of the Buick Motor Car Company, a division of General Motors, in August amounted to 20,004 cars, as compared with 15,600 in the preceding month and 28,971 in August, 1929, according to announcement here today.

The tentative schedule for September calls for a production of around 14,000 cars.

SYRACUSE GEAR CORP. GETS MATHIS CONTRACT

Syracuse, N. Y., Sept. 2.—A. A. Henninger, president and general manager of the newly organized Syracuse Gear Corporation, states that the corporation's New Process Gear factory in Syracuse, and its Warner Corporation plant in Muncie, Ind., are operating about 50 per cent. of capacity, and that new business in sight points to a gradual pick-up. The corporation has secured a contract for manufacturing the transmission and steering gears and rear axles for the French midget car to be produced in this country by Durant Motors, Inc.

DENY REPORT FORD TO BUY CREIGHTON GLASS PLANT

Tarentum, Pa., Sept. 2.—Officials of the Creighton plant of the Pittsburgh Plate Glass Company deny a report that Henry Ford was negotiating for the purchase of the property. The Ford Motor Company owns a small plate glass plant at Glassmere, near Creighton, on the Allegheny River.

REGISTRATIONS EXCEED OUTPUT BY 31,638; ILLINOIS IN AUGUST SHOWS SEASONAL DROP OF 28%

First State to Report For Last Month Off Sharply

NEW YORK, Sept. 2.—Complete new passenger car registration returns for August were received today from Illinois, the first state to report sales for that month. Retail sales in that state last month were 12,113, as compared with 16,833 in the preceding month, a seasonal decline of 28 per cent.

The decline from last year was the sharpest of any month thus far this year, and there are indications that it will stand as the most severe drop for any month of the entire year. The August total of 12,113 compared with 24,706 in the corresponding month of last year, a decline of 50 per cent.

New car sales in Illinois in the first eight months of this year amounted to 137,885, as compared with 190,160 in the corresponding period of last year, a falling off of 27 per cent.

Following are the new car registrations in Illinois for the first seven months of the year, as compared with the corresponding period of last year:—

	1930	1929
January	12,255	14,813
February	13,678	13,707
March	20,859	25,252
April	22,415	29,765
May	23,046	28,836
June	16,339	23,208
July	16,883	29,883
August	12,113	24,706
Totals	137,885	190,160

DURANT SELLS PLANT IN ELIZABETH, N. J., TO BAYWAY TERMINAL

Elizabeth, N. J., Sept. 2.—The twenty-seven-acre property of the Durant Motor Car Company, including the building that cost $16,000,000, has been sold to the Bayway Terminal, Inc., of New York. Officials have refused to divulge the sale price.

Negotiations for purchase of the plant, which has been idle a year, were started last January. William J. MacMillan, president of the Terminal organization, signed the contract a few days ago. The new owners took occupancy today.

They will use part of the building for warehouse purposes and lease the rest to other concerns, none of which has been announced.

Carey L. Allen, superintendent of the plant under Durant ownership, will continue in that capacity for the Bayway concern.

The plant was constructed by the Willys Corporation and finished in 1921. The Durant company bought the factory and land in a receiver's sale for $5,525,000. The manufacture of Star cars was started there.

When in use, the plant was the largest single unit in use for the manufacture of automobiles in the East.

STUDEBAKER TRUCKS ARE IN DEMAND IN ALL PARTS OF THE WORLD

Detroit, Sept. 2.—Substantial orders for the new Studebaker trucks are being received from all parts of the world, according to a statement made by J. M. Cleary, vice-president and general manager of the S. P. A. Truck Corporation. On circular information alone Studebaker's London distributor placed an order for 100 of the new trucks by transatlantic phone.

This is indicative of the reception in all foreign markets, for Paris followed with 30; Barcelona, 20; Madrid, 18; Trichinopoli, India, 12; The Hague, Holland, 11; Tokio, 10, and Manila, 8.

Advance orders in the United States show the same trend. One dealer in a town of 4,000 is reported to have ordered twelve. Another, in a town with a population of only 213, has ordered four.

"With no more than a photograph to show, our Philadelphia distributors were able to sell four of the 1½-ton trucks to a Philadelphia truck user," said Mr. Cleary. "In other instances similar sales have been made. This ready acceptance of the new Studebaker trucks by truck buyers reflects public confidence in the Studebaker name."

Orders for the new trucks received in August exceed August production, it is reported. And there is very indication that September production will be absorbed with equal speed.

These new 1½ and 2-ton Studebaker trucks, with their 70-horsepower, six-cylinder motors and low chassis prices of $695 and $895, respectively, at the factory, offer more power per dollar than any other trucks on the market, according to the manufacturer.

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July Total of 54,079 41% Below Year Ago

NEW YORK, Sept. 2.—Retail sales of new passenger cars in the United States in July held closer to the June level than had been indicated by estimates based on incomplete registration returns and exceeded actual production by 31,638 units.

Complete figures received from all states showed a total of 254,097 for the month, as compared with 260,942 in the preceding month, a decline of only 2.6 per cent. and comparing with a passenger car production of 222,459 during the month.

Estimates based on the sales returns from the first states to report were to the effect that the new car sales in July would total about 245,000, a drop of 5 per cent. from June.

New car sales in July, however, continue to run sharply below the corresponding period of last year, the total for the month comparing

(Continued on Page 2)

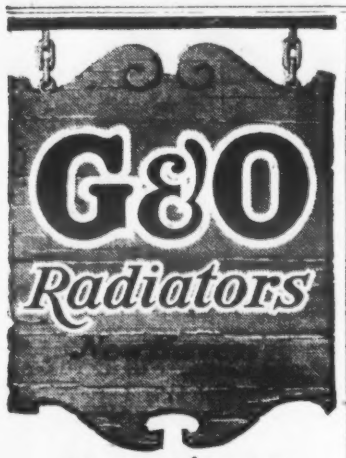
M. E. A. PLANS DRAWING FOR DETROIT SHOW

Chicago, Sept. 2.—Allotment of space for the Motor and Equipment Association's annual international trade exposition will take place at the Hotel Statler in Detroit on Friday, September 19, at 9 a. m., according to the decision of the show committee, which met here last week.

Interest in the annual exposition, which is to be held in Cleveland, November 10 to 14, is running high and the committee expects this year's affair to be the most extensive ever sponsored by the M. E. A. To date, the contracts received for exhibition space exceed those received up to a corresponding time last year by more than 30 per cent. Requests for hotel reservations at Cleveland indicate that jobber members, invited jobbers and foreign distributors will attend in large numbers.

The space drawing will be held jointly with that of the N. S. P. A., which will hold its show in Cleveland during the week following the M. E. A. Exposition, so that exhibitors planning to participate in both shows can arrange to keep the same space for both weeks.

The drawings have been so arranged that individual exhibitors and dual exhibitors will have an equal opportunity to secure as nearly as possible the locations they desire. Neither will have any advantage in the drawing or in the selection of space. Drawings will follow exactly the same procedure used in other years with the slight change made necessary to accommodate dual exhibitors.



AUTOMOTIVE
and
AIRCRAFT PRODUCTS
THE G & O MANUFACTURING CO.,
New Haven, Connecticut

CADILLAC-LA SALLE OFFER NEW MODELS

Detroit, Sept. 2.—New lines of Cadillac and La Salle V-Eights are announced this week by the Cadillac Motor Company. Prices on the La Salle range from $2,195 to $3,245; on the new Cadillac V-8 from $2,695 to $3,795, which are the lowest in the past twelve years of Cadillac's experience.

In addition to the present lines, a full line of V-type 12-cylinder Cadillacs will be presented during the early fall.

Six Fisher body styles and four Fleetwood special custom bodies comprise the complete line mounted on the Cadillac chassis, while the La Salle line sonsists of seven Fisher body styles and five Fleetwood special custom built models. The bodies of the Cadillac reveal an entirely new design motif. The La Salles follow closely the preceding models.

On the Cadillac, a new moulding treatment adds to the stream line effect and curves at the rear of the top have been refined to increase the low sprung appearance.

The front view of the new Cadillac, as well as the mechanism, shows the influence of the Cadillac V-16. A chromium plated screen covers the radiator. A tie bar between the lamps carries a black and silver V-8 medallion. The slotted hood louvres are replaced by ports. The new models carry a new single bar chrome plated bumper.

The steering wheel is of a new design and is non-breakable. Steering effort has been reduced by the new "hour glass" type roller bearing worm and sector gear introduduced on the V-16.

The instrument board is of a new design with all instruments grouped in an oval recessed panel.

The springs are now enclosed in water and dust tight metal covers, which are filled with lubricant.

New type compression rear spring shackles are also used to effect the maximum ease of riding with free spring action. Supplementing this free spring action are four duodraulic shock absorbers, which are adjustable to special degrees of riding comfort, depending on local road conditions.

Cadillac and La Salle bodies are mounted on the frame with fourteen thick blocks of live rubber to insure quietness and insulate the body with frame tremor.

The V-type power plants of the new Cadillacs and La Salles are more powerful. The Cadillac motor develops in excess of 100 horse power, and that of the La aSlle more than 95.

The full throttle engine roar is eliminated by a new intake muffler developed in the General Motors Laboratories.

The Cadillac engine is suspended in the frame at five points, two each at the front and rear of the engine and one at the rear of the transmission. LaSalle has a three-point suspension, the same as the previous model.

COMPARATIVE U. S. NEW CAR SALES

	1930	1929	1928	1927
January ...	180,094	219,845	137,884	174,655
February ...	211,645	235,337	165,316	180,070
March	298,824	378,346	254,881	259,698
Three mos. .	690,563	833,528	558,081	614,423
April	357,064	481,896	332,180	327,703
May	345,041	454,153	351,509	315,328
June	260,942	386,537	317,191	263,868
Six months .	1,653,610	2,156,114	1,558,961	1,521,322
July	254,097	432,695	324,085	247,836
Seven mos. .	1,907,707	2,588,809	1,883,046	1,769,158

JULY CAR SALES TOP ACTUAL PRODUCTION

(Continued from Page ..

with 432,695 in July, 1929, a loss of 41 per cent.

For the first seven months of the year new car registrations in the United States amounted to 1,907,707, as compared with 2,588,809 in the corresponding period of the record-breaking 1929. This was a falling off of 26 per cent.

The improved showing for July sales as compared with June resulted from the excellent record of some of the last states to report, notably New York and Texas. New York resigstrations in July amounted to 35,184, as compared with 24,203 in the preceding month, a gain of more than 40 per cent. Texas new car sales in July amounted to 10,628, as compared with 10,785 in June, a slight loss.

Following are the new car sales in the twelve last states to report for July, with comparisons with the corresponding month of last year and the preceding month:—

	July, 1930	July, 1929	June, 1930
Georgia	1,226	2,051	2,437
New Mexico...	904	1,251	478
Virginia	4,081	5,982	4,839
Colorado	2,273	3,785	2,718
Kansas	6,239	13,640	3,133
Kentucky	2,816	4,631	3,507
Mississippi	1,779	2,965	2,241
New York.....	35,184	45,155	24,203
Tennessee	4,122	6,918	3,023
Texas	10,628	24,959	10,785
Wyoming	512	963	424
Maine	2,118	2,626	3,000

Complete July new car registration returns for July for all states, by makes, will appear in the Automotive Daily News for September 4.

July was the first month thus far this year in which the actual retail sales of new cars in the United States exceeded the new cars turned out by the factories in the country. The difference of more than 31,000 between the production and retail sales in July does not represent the entire reduction in stocks of cars on hand effected by the manufacturers and dealers during the month. Export shipments in July are estimated to have accounted for at least 15,000 of the cars turned out in that month, meaning a reduction in stocks in this country of not less than 46,000.

PERIOD BRAKE TESTS ORDERED IN JERSEY

Trenton, N. J., Sept. 2.—Motor Vehicle Commissioner Hoffman today ordered all New Jersey motorists to make periodic brake inspections with a view to preventing accidents.

SPARKS *from* DETROIT

• • •

First Packard to Take To the Road

• • •

And How Packard Started

• • •

By Chris Sinsabaugh

THE very first Packard ever built has been dolled up and readied for its last trip on the road. The experimental model, built way back in the late '80s by J. W. Packard and his brother, W. D. Packard, then operating as the Ohio Automobile Company at Warren, O., has long lived at the Packard factory, an object of great interest to the thousands who mill through the big plant.

Now has come the time when it goes to its final resting place, glass-inclosed platform in the magnificent engineering building of the Lehigh University at Bethlehem, erected by the late J. W. Packard just before his death. To H. F. Olmstead, one of the Packard officials, has been delegated the task of taking the old car over the road to Bethlehem. The trip will be made this month.

The old car still is a plugger, being capable of thirty miles propelled by its single cylinder. Not much had to be done to it to prepare it for the trip, outside of getting a new set of tires. These tires, which are single tubes of the bolted-on type, 40 by 2 inches, had to be made by the B. F. Goodrich Company, which luckily had the necessary molds.

* * *

HOW J. W. Packard happened to enter the automobile manufacturing field is an interesting story. At the time he was a wealthy manufacturer of electrical contrivances at Warren. His attention turned to motor vehicles and he invested in one of those weird de Dion-Bouton machines, a cross between a motorcycle and a side car as we know the side car today. That didn't satisfy him and he bought an electric. This also was a dud. He heard about the Winton and he bought one of those. It was far from satisfactory, it is reported, and Mr. Packard did not hesitate to tell Alexander Winton what he thought of that particular horseless carriage.

Winton didn't take the criticism at all well and he is reported to have retorted: "Well, if you don't like the Winton, why don't you build an automobile of your own?"

"I will," grimly replied Mr. Packard, and he did. And thus the Packard came into being.

* * *

ALSO along educational lines is the announcement made by the United States Rubber Company that it is opening a tire repair school offering four weeks of free instruction to all repair men. The school is situated in the executive building of the company in Detroit, and to Charles Samson, manager of the accessories and repair materials division, has been given the job of directing the school. Not only will the students be taught everything about tire repair but they also will be given a course in accounting, credit, sales, superservice and every other phase of the tire merchant's business as it pertains to the shop. Enrollments are now being made.

88% *of New Car Models Need* ETHYL Gasoline *to* Deliver Their Full Power

MOST new models have high compression motors; ratios are 5 to 1 or greater. This gives the car more power, more flexibility and increased efficiency for every gallon of gasoline.

But only a motor fuel with the controlled-combustion properties of Ethyl Gasoline can bring out this full power, this full efficiency. Ethyl Gasoline is the only motor fuel containing Ethyl fluid, the control ingredient.

To the power of straight gasoline, Ethyl fluid adds a controlling force that prevents the sharp, irregular explosions that waste gasoline power. Ethyl Gasoline burns with smoothly increasing pressure that sends pistons down in powerful thrusts.

That's why Ethyl Gasoline delivers so much more of its power into the crankshaft. That's why it brings out the best of the new high-compression motors.

Ethyl Gasoline makes any car run better. But high-compression motors demand Ethyl to give the power and efficiency for which they were built. Ethyl Gasoline Corporation, Chrysler Building, New York City.

ETHYL GASOLINE

The active ingredient in Ethyl fluid is lead

It leads all others in the closed car upholstery field

CHASE Velmo

the Mohair with a history . . . a tradition . . . a reputation . . . and the prestige that comes from wide dealer and customer acceptance.

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

MIXED TREND REPORTED BY JOBBING CONCERNS IN DULUTH

DULUTH, Minn., Sept. 2.—A survey of the jobber business in Duluth reveals a mixed trend. Different jobbers report different lines as best movers.

In view of these facts the survey reveals that jobbers are doing business in one line or another even though jobbers are not doing a good business in all lines. That better business is just around the corner, is the opinion of several of the leading jobbers in Duluth. Other jobbers have found no reason to complain, as they claim they are doing about as good as can be expected.

One important factor in the jobbing business in Duluth, in 1930, is that this year has been a year of expansion for several of the leading jobbers. Some have increased space at their place of business, while others have added new lines and expanded in other minor ways, backing their expansion with utmost faith in the future. One of the largest jobbers in Duluth moved into new and much larger quarters in 1930 and reports a larger service business in 1930 than in 1929. The fact that thousands of people in the Duluth trading territory are driving their old automobiles has been a big factor in increasing service jobs.

C. P. Mayhew, president of the Midwest Motor Specialty Company at 403½ East Superior St., reports that his company has launched a large expansion program, part of which has been completed, backing this expansion because prospects for the future are good. This company has increased the amount of space formerly used in its business and has added two salesmen to cover northern Minnesota, Wisconsin and Michigan. The expansion includes adding of a large number of new lines including gaskets, pins, plain rings, brake lining, valves, fan belts and other items too numerous to mention. This company originally handled only Simplex piston rings and ever since the start of the business depression has enjoyed a healthy growth. Mr. Mayhew reports that he has no reason to complain, as business is fair and growing in volume for his concern, with the future pointing to a much greater growth for his company.

S. N. Peterson of Paramount Service, Inc., at 521 East Superior St., reports that August business is opening the fall season with better business. Electrical repair work was better in July than in June. Speedometer work was better too, while the battery business was very good, starting the last part of July and continuing the same in August. This company has added Winfield carburetors to its line.

The Hanson-Duluth Company, jobber, at 416 East Superior St., has lost a member of its staff, John A. Johnson, who was drowned in Longyear Lake at Chisholm on the Mesaba Range. The Hanson-Duluth Company was closed during the hours of the funeral, which took place in Duluth.

The United Electric Service has completed a large expansion program during 1930 with the moving of this concern into new and much larger quarters at 301 East Superior St. The new quarters feature a larger parts department, a larger stock room and a much larger service floor with drive-in facilities on Superior Street, the main business street of Duluth. J. G. Mickelson, manager, reports that service business is much better in 1930 than it was in 1929. Wholesale business is below that of 1929. Electrical repair business is good, and better than in 1929.

Editor's Column

FURTHER extension of the Standard Oil Company of New Jersey's plan for selling automobile tires and tubes at its owned and operated service stations has been indicated in the Lamp, organ of the company. It was stated that preparations are now under way to extend the new service through the marketing fields of the Imperial Oil Company, Ltd., the Humble Oil and Refining Company, and the Standard Oil Company of Louisiana. Actual sales are being contemplated by the latter company within a month.

Clarifying the company's purposes and policies in undertaking the sale of the equipment, the Lamp indicated that there was no intention to affect the price structure of the tire industry or to force the tire business out of any of the existing channels of distribution. This, it was said, is in part borne out by the company's marketing policy, in which it will attempt to maintain itself in a competitive position, taking a place between the price of standard brands of tires on the one hand and the mail order tires on the other hand.

The Lamp continued: "It is a well-established principle that the individual dealer's prosperity is reflected directly in the business of the company whose product he sells, and the inclusion of commission retail stations as well as 100 per cent. dealers and company owned service stations in the tire arrangement is intended to give the independent dealer handling 'Standard' products a further legitimate advantage to strengthen his business.

"As in the case of Colonial Beacon and the Standard Oil Company of Pennsylvania, tires and tubes will continue to be supplied by various leading manufacturers under contracts specifying quality and construction, and will be marketed under the brand name 'Atlas.' Furthermore, in order to assure the buyer that the product he is getting has the full backing of the oil company itself, the Standard Oil Company of New Jersey covers every tire with its own guarantee. The same is true of other subsidiaries handling the product."

In regard to the matter of competition for the dealers from the mail order houses, the lamp stated: "In the past, the dealer labored under an appreciable handicap in his sales of automobile tires because of competition from mail order houses which he was powerless to meet. Naturally, these agencies, because of the volume of their purchases, were in a position to offer tires direct to the consumer at lower prices than could the dealer. This handicap the company found itself able to lessen considerably."

SANIVAC SALES CO. FORMED IN PONTIAC

Pontiac, Mich., Sept. 2. — The Sanivac Sales Company, with offices at 14 South Cass Street, has just been organized to manufacture and distribute Sanivacs in the central and eastern states.

Sanivac is a new adjunct for gasoline filling stations, whereby the operator can instantly clean the owner's car by a powerful vacuum process. It is an adaptation of the household vacuum cleaning machines, and when put in operation on the interior of a car, quickly cleans cushions, floor mats and carpets and the upholstery in general.

Manufacture and distribution in the central and eastern fields will begin at once, according to the officials of the Sanivac Company.

TEXAS JOBBERS ELECT SURAVICH

Dallas, Tex., Sept. 2 (UTPS).—At the last meeting of the Texas Automotive Jobbers' Association, Sam Suravich, secretary-treasurer of the Beard & Stone Electric Company of Houston, was elected president, and Jack Nussbaum of the Archenhold Auto Supply Company of Waco, vice-president.

At this meeting the association decided to obtain a complete list of dealers and garagemen in Texas and send out a series of letters stressing the advantage of the "Care Will Save Your Car" campaign of the Motor and Equipment Association.

The new president said the association will continue its progressive ideas and that the organization will work for the good of the members and the trade as a whole.

The next meeting will be held in Dallas during the second week in October. At that time the members of the organization will be attending the regular fall show of the Dallas Automotive Trades Association.

U. S. RUBBER CO. ADDS SEVEN NEW DEALERS

New York, Sept. 1.—The United States Rubber Company has added seven new dealer outlets in and around the metropolitan area, according to announcement from L. L. McClintock, New York district manager of the tire department.

The new outlets are: The three stores of the William Dudde Corporation, at 601 57th St.; 427-9 Southern Boulevard, Bronx, and 170-14 Hillside Ave., Jamaica; Harvey & Hayes, 328 New Main St., Yonkers; E. A. Wildermuth, 1,102 Atlantic Ave., Brooklyn; Herbert Brakes, Wheels, Tires, Inc., 158-168 Westchester Ave., White Plains, and the Egan Tire and Rubber Company, 51 Ave., White Plains, and the Egan Tire and Rubber Company, 51 Courtland St., Bridgeport, Conn.

Secret of a motor that "rests" Solved by an organization that doesn't

REST is not in the Studebaker vocabulary . . . except as it now applies to its sensational discovery of *Free Wheeling*.

Studebaker engineers couldn't rest until they found it . . . and when they found it they couldn't rest until they gave it to their dealers. There was no temptation to keep dealers waiting for a revelation for which American motorists have waited so long.

Never in the 78 years of its growth has Studebaker withheld any improvement that its dealers could offer prospects for a year or a month or even a day, out of selfish consideration for more opportune business conditions.

All times are opportune to Studebaker dealers.

Registration figures show that this army of Studebaker dealers are now "free wheeling" to new sales heights—and are making money while less fortunate dealers are making excuses.

Foresighted dealers with a Studebaker franchise have more than merely a line of eights to sell. They can offer Seasoned Champion Eights backed by a successful record of more than three years service in the hands of more than 100,000 owners. These men—and only these Studebaker dealers—can offer the thrill and thrift of Free Wheeling.

Free Wheeling puts new pleasure in motoring by taking out much of the work. Here is a long wanted improvement which enables timid drivers to shift gears at any speed silently and smoothly. Here is one exclusive feature which reduces operating cost 12% to 20%. What a selling point this year when lookers need an extra urge to turn them into buyers!

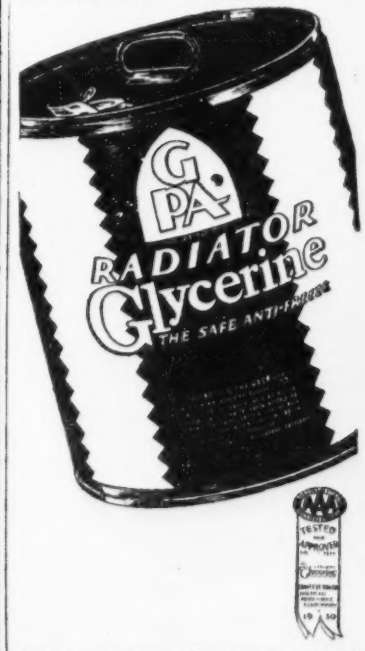
If you are ready to apply modern merchandising methods to a modern line of champion motor cars—now listing from $795—please write me personally for complete details and information on available territory.

PAUL G. HOFFMAN
Vice-President
Studebaker Corporation of America
South Bend, Indiana

SMASHING color in the magazines

1930 G.P.A. campaign the biggest in history

"When things go good, step on the gas." Last year 1,600,000 motorists used glycerine anti-freeze. So G.P.A. Radiator Glycerine will crash through this year with a big magazine color campaign—a smashing spread and three color pages in The Saturday Evening Post, Liberty, and many other big circulation magazines. Newspaper advertisements will run 3 at a time in each paper when cold snaps occur. The swing is to glycerine. We're pushing. Send for dealer service manual.



GLYCERINE PRODUCERS' ASSOCIATION
45 EAST 17th STREET, NEW YORK CITY

The following are makers of G. P. A. Radiator Glycerine:

ARMOUR AND COMPANY
BEACH SOAP COMPANY
COLGATE-PALMOLIVE-PEET COMPANY
HARLEY SOAP COMPANY
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KIRKMAN & SON
THE PROCTER & GAMBLE CO.
JOHN T. STANLEY CO., INC.
SWIFT & COMPANY
ALLEN B. WRISLEY CO.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

Entered as second-class matter August 27, 1925, at the post office at New York, N. Y., under the Act of March 3, 1879.

Circulation—Net paid Average over 10,000 daily guaranteed.
Member A. B. C.

WEDNESDAY, SEPTEMBER 3, 1930

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Distribution of Money

IN a recent review of the present business situation, commented on in this column, the National City Bank of New York called attention to the fact that easy money per se is not a panacea for depression. To exert a real influence on recovery, money must be at work in the investment field. Conditions to date this year have not been such as to tempt the easy money that we have enjoyed into the investment field where it can exert pressure on general business.

It is interesting and significant to note in this connection that bank deposits during 1930 are far ahead of the levels that existed in 1929. Long-term deposits at the present time are probably nearly $1,000,000,000 greater than they were in 1929. This type of deposit is that which savings banks specialize in and certainly the tremendous increase this year is significant. People instead of placing their money in industries or businesses, to make possible expansions or development or what you will, are tucking it away in savings banks and waiting for signs of renewed prosperity before they send it out in investment fields.

Many authorities have noted that the present depression is "more than psychological." By that they mean that there are or were actual unfavorable business conditions underlying the depression. It was not entirely a scared condition in the minds of investors. This, to an extent is true. Overproduction in many lines caused a downward trend of business. But it was and is a psychological factor, a fear in most people's minds, that has made the reduction in production far greater than the reduction in need. Note we do not say reduction in demand, because the psychological factor of fear kept demand lower than it should have been. The difference between need and actual buying is the delayed market about which we hear so much. When need becomes so insistent that purchases have to be made in quantity, bank deposits will begin to diminish, retail trade will begin making demands on industry and business in general will definitely start on its upward curve, which will probably continue through 1931 and 1932.

Obviously the question on every side is "when are all these factors real and psychological going to swing in line to start business on the upward curve?" No one can answer this at the present moment with certainty. There is a general trend of belief in conservative financial circles, that following the extremely dull July and August, we shall feel the first pulsations of the upward swing this fall. In the automotive industry, it may happen that the definite upturn will be delayed until the first of the year. On the other hand, few industries have piled up such an obvious delayed market as has the automotive. Any general improvement in business conditions may release this flood of delayed orders for actually needed motor transportation and give us a fall and early winter buying season better than we may be inclined to look for at the present moment.

HERE'S HOPING.

The Metallurgist

WHETHER we class the metallurgist as a chemist or as an engineer, certain it is that engineering, particularly the branch known as automotive, owes an immeasurable debt to this type of scientist.

Metallurgy is a fairly ancient science, but the advances made in it during the past fifty years dwarf all that preceded that period and within the last twenty years the pace of development has been enormously accelerated by the demands of automotive transportation. Scarcely a year passes that improvements are not registered in the composition or treatment of metals and all these advances have as their object the enabling of the engineer to achieve objectives long desired, but hitherto impossible, because of faults in the products with which he has had to work.

Truck Sales in Medina Reported on Upgrade

Medina, O., Sept. 2.—Truck sales are definitely on the upgrade in Medina county and adjacent territory, a survey of leading distributors disclosed this week. Believing that the fall months offer the best opportunities of the year to sell trucks, sales organizations of the more enterprising firms have for some weeks been concentrating on sales of commercial trucks.

"The fall is the period of the year when business firms buy new equipment which will operate satisfactorily through the winter. In addition, many businesses have their peak or rush seasons at this time of the year, and most have the equipment to handle their deliveries," said a representative of one of the leading distributors of trucks here.

He stated that at this time the coal dealers are just beginning to enter their busy season. They must have trucks to handle their deliveries, and this has resulted in the sale of several 1½ ton trucks.

Opening of the school term early in September has been another angle not overlooked by dealers. Children of the rural districts are brought to and from school and individuals or firms who contract to bring the children to their respective buildings have proved excellent prospects for light truck chassis. The Gibbs Motor Car Company recently sold several Chevrolet trucks to be used for carrying school children and the Feckley Auto Sales Company also recently delivered a number of Ford trucks for the same purpose.

Farmers in particular are finding the light delivery truck an economical and necessary addition to farm equipment. Dealers here are finding many sales among state, municipal and public utility concerns which are engaged in construction projects in this section.

There has been a decided improvement in truck service demand in the past sixty days, according to dealers maintaining departments. Anticipating improvement in business this fall, most of the fleet owners have been contracting for repairing their trucks so that they will be in readiness to take care of this expected increased hauling, one dealer said.

A half dozen distributors of trucks other than Chevrolet and Ford are reporting increased sales, this being general throughout the Medina sector. The semi-trailer type trucks appear to be more in demand and when firms maintaining one or more trucks buy new units usually those of this type are wanted.

Introduction recently of a new 1½-ton truck by the Chevrolet Company has done much to stimulate sales of this particular make and this move on the part of the manufacturer is said to have started truck sales soaring in Medina and adjacent smaller towns.

COMING EVENTS

SEPTEMBER

22-26—**Chicago, Ill.** American Society for Steel Treating meeting at Stevens Hotel.
29-Oct. 4—**Pittsburgh, Pa.** National Safety Council Annual Safety Congress.

OCTOBER

2-12—**Paris, France.** Automobile Salon.
6- 7—**Reading, Pa.** Pennsylvania Automotive Association Convention.
6-11—**Washington, D. C.** Sixth International Road Congress.
6-11—**Washington, D. C.** American Roadbuilders' Association Convention.
7- 8—**Detroit, Mich.** Society of Automotive Engineers production meeting at Book-Cadillac Hotel.
14-15—**Syracuse, N. Y.** New York State Dealers' Association Convention.
16-25—**London, England.** Olympia Motor Show.
22-24—**Pittsburgh, Pa.** Society of Automotive Engineers transportation meeting.

NOVEMBER

4- 7—**Chicago, Ill.** National Tire Dealers' Association Convention.
6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-14—**Cleveland, O.** Motor and Equipment Association Show.
13-23—**Paris, France.** Commercial Vehicle Salon.
17-21—**Cleveland, O.** National Standard Parts Association Show.
30-Dec. 6—**New York.** Automobile Salon at Hotel Commodore.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.
24-31—**Chicago, Ill.** National Automobile Show.

FEBRUARY

7-14—**Los Angeles, Cal.** Automobile Salon.
21-28—**San Francisco, Cal.** Automobile Salon.

BOHN MEETS TODAY FOR DIVIDEND ACTION

New York, Sept. 2.—Directors of Bohn Aluminum and Brass Corporation meet for dividend action tomorrow. In view of the sharp decline in earning and the slow recovery of the motor industry there is strong likelihood that the dividend due at this time will be passed or reduced. It is believed directors will decide to conserve the company's strong cash position pending a clearer outlook on business conditions.

Operations so far in the third quarter have been at low rate, with indications the company will break even or show only a nominal profit for the current period. Unless there is substantial upturn in the automobile business, little improvement can be anticipated in the fourth quarter, which normally is a dull periord for Bohn. Probabilities are results for the full year will fail to equal dividend requirements of $3 a share by a substantial margin.

For the six months ended June 30, Bohn Aluminum reported net profit of $688,766 after charges and Federal taxes, equivalent to $1.95 a share earned on 352,418 no par shares. This compared with net profit of $1,781,579, or $5.08 a share, on 350,831 shares in first half of 1929. Sales for the first six months this year showed a decline of 54.5 per cent. to $9,579,208, as compared with first half of 1929.

PACKARD

"It is my opinion that our directors have no thought of passing the dividend due in December," said Hugh J. Ferry, treasurer of Packard Motor Car Company, commenting on rumors which have been current that the December dividend might not be paid. "Our cash position is currently around $18,000,000, and there is no reason for apprehension," he said.

In June directors declared a dividend of 25 cents, payable September 12 to stock of record August 15, covering the third quarter.

TIDE WATER OIL CO. SEEKS $2,201,000 TAX DECREASE

Bayonne, N. J., Sept. 2.—The Tide Water Oil Company of this city has appealed to the County Board of Taxation for a reduction of $2,000,000 in assessments on personal property, and $201,000 in assessments on realty taxes. The general assessment of the company's larger holdings in Bayonne is $4,000,049. The company is assessed an additional $207,000 on improvements and additions to its large holdings. Although it claims this assessment is excessive, it makes no appeal for a reduction. The increase of $2,040,000 on personal property is said by the company to be an excess of $1,839,000 over the actual personal property holdings. It seeks a reduction of $2,000,000 on this assessment.

UNIT CORPORATION

Earnings for the first six months of 1930 of the Unit Corporation of America and subsidiaries were $142,649.91. This compares with $268,616.60 for the first half of 1929. The dividend requirement for the first six months of 1930 was $138,688.

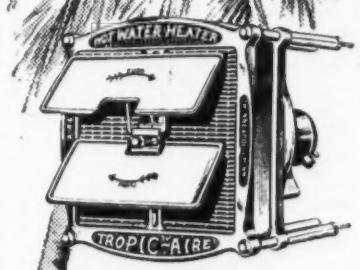
GARFIELD TOOL AND DIE TO LOCATE IN E. PALESTINE

East Palestine, O., Sept. 2.—The Garfield Tool and Die Company, which will vacate the plant near Salem, O., is making ready to occupy an abandoned rubber plant here. The company has employed fifty men at Garfield, but it it expected that this number will be doubled with the greater facilities provided here.

TROPIC-AIRE

Reg. U. S. Pat. Off.

The Original Fan-Equipped Hot Water Automobile Heater



The principle of hot water heating, pioneered by Tropic-Aire, is the practical, satisfactory way to get

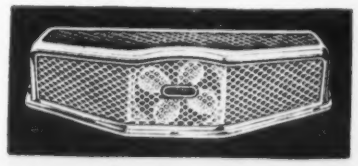
1. Ample heat for all cars in coldest weather.
2. Clean, pure air, free from odors and deadly carbon monoxide gas.

Dealers—you want quick profits—now to make 1930 a good year. Write us.

Standard Model Tropic-Aire

Built for installation under instrument board—in three sizes—the senior for large cars, the Junior for medium sized cars, the Ford for Ford Model "A" cars.

TROPIC-AIRE, Inc.
107 Eleventh Avenue, N. E.
Minneapolis, Minnesota
In Canada:
14 Breadalbane Street, Toronto
52 Adelaide Street, Winnipeg
Pat. Nos. 1581761, 1668491, RE17131.
Others pending.



The New Rear Compartment Heater

Installed at back of front seat or under rear seat—a perfect heating plant for Town Car, Limousine, Taxicabs, the larger Coaches or Sedans. Independent or operates in unison with front heater.

Warren-Nash Boosts Car Sales Through Salesman On Service Floor

New York, Sept. 2.—The service floor is as productive of good prospective automobile buyers as the showroom or other regular customer sources salesmen for the Warren-Nash Motor Corporation have found.

Salesmen at the Warren-Nash headquarters building, at Broadway and 133d Street, eagerly wait their turn on the service floor for that reason, according to Edwin A. Gelein, vice-president of the concern.

The salesmen from the showroom are rotated on the service floor, there being one on duty on the service floor at all times. The service floor salesman is on duty for a half-day shift. This practice is followed in the showroom, also, as it has been found that salesmen are more productive when inside floor work is mixed evenly with outside contact work, Gelein explained.

The use of a salesman on the service floor has been in effect at the Warren-Nash headquarters building three years.

Discriminating sales psychology must be employed by the salesman who is working on the service floor, it has been found. Even more judgment and diplomacy than are called for in the showroom or in outside work must be employed on the service floor.

"Naturally a salesman cannot solicit all of the persons with cars on the service floor," Gelein said.

"The man on duty must use good judgment and must approach his prospect with a diplomatic opening.."

One distinct advantage of service floor salesmanship is the fact that sales are often created among owners who would never think of visiting the showroom.

Persons who come in with cars which have been in accidents and those whose cars are getting old constitute the majority of potential new car buyers. Where an automobile has been so badly wrecked that several hundred dollars' worth of repair work is necessitated the owner, when properly approached by the salesman, is very likely to be eager to accept the suggestion that he trade his old car in on a new one. One factor in a sale of that type is that cash must be paid for all repair work while a new car can be paid for in installments.

The owner whose car is getting old and requiring more and more in the way of upkeep is another prospective buyer who can often be easily sold the service floor salesmen have found. Such an owner often is glad to accept the salesman's invitation to step into the showroom and look the new models over. A sale often results.

Discrimination on the part of the salesman is required in picking out prospective new car buyers on the service floor. An owner with a comparatively new car is never approached, for obvious reasons.

The Warren-Nash Company has evolved a method of strict fairness in the service floor sales commissions. Every showroom salesman has a large card with his name printed on it. When he is sent to the service floor this card is posted on a bulletin board where all service men can see it. Thus they know the name of the salesman on the floor, even if he is a new man with whom they are not personally acquainted.

No other salesman gets credit for a sale from the service floor while that card is up. All possibility of favoritism on the part of the staff is done away with by that system. A record of prospects is filed in order that the source of an order can be accurately traced. The file card contains the source of the prospect and the time he was on the service floor. Each service man files the prospective buyers in that fashion. The service men are given commissions for sales emanating from the service floor. The commission for the service man is not subtracted from that of the salesman, though.

GENERAL ELECTRIC PAYS $56,974 FOR IDEAS

Schenectady, N. Y., Sept. 2.—That there is always a better way to do the job, and that workmen are showing keen interest in trying to find that better way, is indicated by a report of the General Electric Company showing that for the first six months of this year $56,974 was paid to employees for suggestions of plans to improve their jobs.

For the first half of the present year a total of 17,474 suggestions were made, and 5,616 were adopted, as compared with 13,200 suggestions offered the first six months of 1929, and an adoption of 3,953, for which $49,586 was paid employees.

Send for Our "SALES PLANS"

PLAN 1—NEW CARS	$ 3.00
PLAN 2—USED CARS	3.00
PLAN 3—CONTEST	5.00
PLAN 4—CAR TAGGING	3.00
PLAN 5—POST CARS	3.00
PLAN 6—OWNER PROSPECTS	3.00
ALL SIX PLANS	15.00

SALES PROMOTION CO.
276 Meehan Avenue, Philadelphia, Pa.

Price Range of Passenger Cars

Comparison of lowest price of phaeton or touring models.
(As of September 1)

Under $1,000.

Make	No. Cyls.	Price
Ford	4	$440
Chevrolet	6	495
Plymouth	4	625
Willys 98B	6	735
Pontiac	6	795
De Soto	6	830
Chrysler 6	6	835
Dodge 6	6	875
Studebaker 6..	6	895
Durant 6-14dl.	6	960
Oldsmobile	6	965
Willys-K 87	6	975
Nash	6	995
$1,000—$1,499		
Oldsmobile ww.	6	$1,020
De Soto	8	1,035
Oldsmobile	6	1,040
Buick	6	1,055
Oldsmobile d l.	6	1,095
Durant 6-17dl.	6	1,185
Reo 15	6	1,195
Hupmobile	6	1,250
Studebker Dict.	8	1,285
Chrysler 70	6	1,295
Buick	8	1,335
Hupmobile	8	1,450
Nash Tw. Ig.	6	1,475
$1,500—$1,999		
Hudson	8	$1,500
Marmon 8-69..	8	1,610
Buick	8	1,620
Hupmobile C..	8	1,785
Nash Tw. Ig.	8	1,845
Studebaker 8-90	8	1,850
Elcar 130	8	1,995
$2,000—$2,999		
Marmon 8-79..	8	$2,020
Packard 733	8	2,025
Hupmobile H..	8	2,190
Graham 127	8	2,295
Graham 137	8	2,295
La Salle	8	2,385
Elcar 120	8	2,465
Jordan	8	2,495
Jordan spt.	8	2,795
Franklin 147	8	2,885
$3,000 and Over		
Pierce-Arrow B	8	$3,125
Marmon Big 8.	8	3,170
Packard 740	8	3,190
Pierce-Arrow A	8	3,975
Lincoln	8	4,200
Packard 745	8	4,585
Cadillac	8	4,700
Packard speed.	8	5,200
Cadillac V-16..	16	6,150

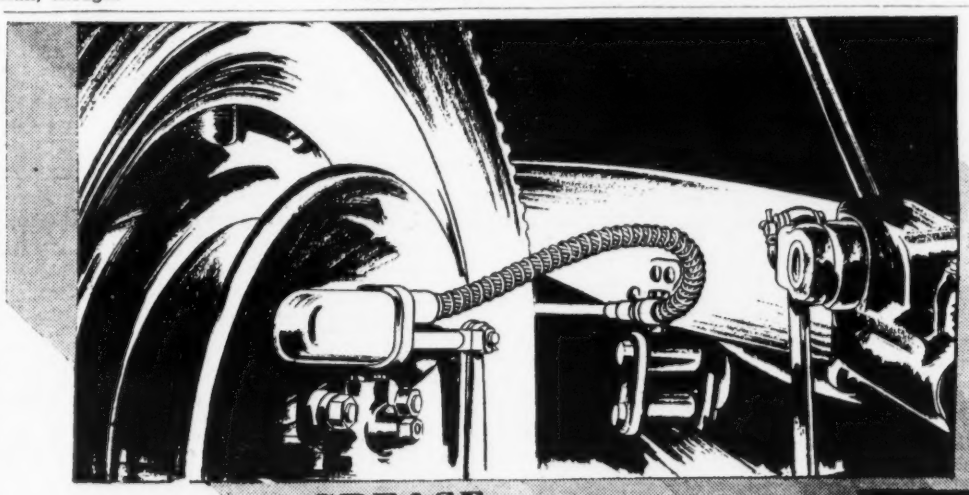
TEXAS TRADES GROUPS PLAN CASH POLICY FOR SERVICE TO AUTOMOBILES

Dallas, Tex., Sept. 2 (UTPS).—Because of heavy losses through credit extensions to customers, the members of the Fort Worth Automotive Trades Association have adopted the policy of cash for service to automobiles.

A survey of the situation in Fort Worth revealed the fact that some service departments had lost as high as $9,000 annually through "charge accounts." Under the new cash policy, the service department of the automobile concerns and the independent garages have eliminated the expense of bookkeeping and collecting accounts. The members of the association declare they are passing this saving on to their customers, who are now paying cash for their work in lower prices for car maintenance.

The Wichita Falls Association members "went on a cash basis" plan some time ago because it was found they were losing money through bad accounts. At Wichita Falls in the service departments of the automobile concerns and the independent garagemen all work done is guaranteed for five days. It is reported from Wichita Falls that the largest number of comebacks in one month at any service department was four when approximately 1,000 jobs were done.

It is said the "cash on the barrel head" policy may be established by the members of the Dallas Automotive Trades Association. It is known they have been studying the Wichita Falls and Forth Worth plans. They have learned that the "cash" system in these two cities has not resulted in any less work in the service departments and that the customers appreciate "closer prices" because of elimination of expense and guarantees for service performed.



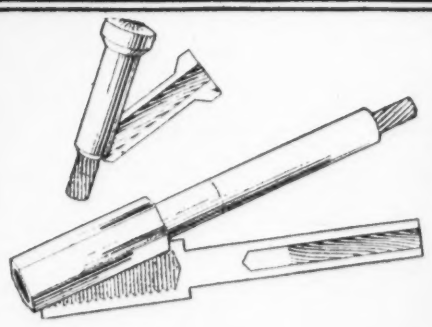
GREASE TIGHT
WATER PROOF
LESS PARTS
SIMPLE
EFFICIENT

NOTE the extreme simplicity of the Tru-Lay Brake Control pictured above. Ease of assembly—few parts—self-compensating to axle and wheel movement—no wear, play or adjustment.

The inherent flexibility of the Tru-Lay Brake Control allows it to compensate for wheel and axle movement. The only moving part is a special preformed strand which slides in a bath of grease in a grease-tight, water-proof conduit . . . nothing to service . . . nothing to get out of order.

Two large production American-made automobiles are now standard equipped with Tru-Lay Mechanical Brake Controls. Write for complete information. Address:

AMERICAN CABLE COMPANY, *Inc.*
An Associate Company of the American Chain Company, *Inc.*
3-111 General Motors Bldg. Detroit, Michigan
Executive Offices:
New York Central Bldg., 230 Park Ave., New York, N. Y.



End fittings *"cold-flowed"*

The illustrations show how the end fittings seize the strand. The metal of the fitting is cold-flowed onto the strand, filling each interstice or space between surface wires with metal. Full strength of the strand is assured because no heat, zinc or solder is applied. Tru-Lay Brake Controls are safe! The "Tru-Lay—Tru-Loc" method of applying fittings to strands and cables made possible the development of Tru-Lay Brake Controls.

TRU-LAY BRAKE CONTROL

Service Notes

Newark, N. J., Sept. 2.—The Berwyn Garage, Inc., has been organized here by David L. Heller, East Orange; Jason Straus, South Orange, and Fred Walker, Millburn.

Erie, Pa., Sept. 2.—The Parent Oil Company, Inc., headed by Herbert L. Parent, operating a chain of one-stop superservice stations in this city and vicinity, has filed plans with the city building commission for the construction of a modern service station and garage in lower Parade Street, to cost $40,000, with equipment installations.

Buffalo, N. J., Sept. 2.—The K. & K. Auto Service has been established as a garage, service station and accessory shop here by Frank Kaeflein at 69 Langmeyer Ave.

Longview, Wash. Sept. 2.—Jack Manning of this city has been appointed dealer and distributor for Kelly-Springfield tires in this territory. His firm, which will be known as the Manning Tire Service, will be located at 1349 Vandercook Way.

Bayonne, N. J., Sept. 2.—Further extension of its activities in the air has been made by the Standard Oil Company of New Jersey, the latest being the purchase of a Kinner powered fleet to be used in aviation sales and promotion. This plane, together with ten other planes, is being used by the company in varied service ranging from the transportation of company officials to exploration for oil deposits. The company's equipment is also used extensively in the testing and development of the product of the Stanavo Specification Board, Inc., organized and mantained by the Standard Oil Company of California, Standard Oil Compay of Indiana and Standard Oil Company of New Jersey.

KEY TO ABBREVIATIONS USED IN THIS TABLE

GENERAL

*In addition to its regular line Oldsmobile also offers a de luxe line. De luxe equipment includes: Six wire wheels (with six tires and tubes), two wheels carried in front fender wells and securely locked in position, chromium-plated headlamps, four spring boots, folding trunk rack at rear and sheet metal fenders, etc., ducoed in color on those models on which ducoed sheet metal is more harmonious than is black enameled sheet metal. It is also a special line for 1930.

SPEEDOMETER

AC—AC Spark Plug Co., Flint, Mich.
NE—North East Appliance Corp., Rochester, N. Y.
Ste—Stewart-Warner Speedometer Corp., Chicago.
*Var—Various makes.

CLOCK

Borg—Borg Clock Co.
Jag—Jaeger Watch Co., New York City.
NH—New Haven, See Phi.
Phi—Phinney-Walker Co., New York city.
Ster—Sterling Clock Co., La Salle, Ill.
The—Seth Thomas Clock Co., New York, N. Y.
Wal—Waltham Watch Co., Waltham, Mass.
*Optional.

FUEL GAUGE

AC—AC Spark Plug Co., Flint, Mich.
K-S—King Seeley Corp., Ann Arbor, Mich.
Mot-M—Moto Meter Gauge and Equipment Corp., L. I. City, N. Y., and La Crosse, Wis.
Ster—Sterling Clock Co., La Salle, Ill.

LOCK

BS—Briggs-Stratton Co., Milwaukee.
Ele—Mitchell Specialty Co., Holmesburg, Pa.
DR—Delco-Remy Corp., Anderson, Ind
Her—Hershey Mfg Co., Chicago.
Joh—Johnson Automobile Lock Co., St Louis, Mo.
NE—North East Appliance Corp., Rochester, N. Y.
Sha—Shaler Lock Co., Milwaukee, Wis.
Yal—Yale & Towne Mfg. Co., Stamford, Conn.
*Reo Model 15 uses Mitchell.

SPARK PLUG

AC—AC Spark Plug Co., Flint, Mich.
Cha—Champion Spark Plug Co., Toledo O.

BATTERY

Ex—Electric Storage Battery Co., Philadelphia.
Nat—National Lead Battery Co., St Paul, Minn
Pre—Prest-O-Lite Co., Indianapolis, Ind
USL—U S. L. Battery Corp., Niagara Falls, N. Y.
Wil—Willard Storage Battery Co., Cleveland, O
*Var—Various makes—Exide, Willard Delco-Remy and USL.
**Both Exide and Delco Remy used.

HEAT INDICATOR

AC—AC Spark Plug Co., Flint, Mich.
Mot-M—Moto Meter Gauge and Equipment Corp. L. I. City, N. Y., and La Crosse, Wis
Ste—Stewart Warner Speedometer Corp.
Ster—Sterling Clock Co., La Salle, Ill.

CIGAR LIGHTER

*Cigar lighters in many cases are optional equipment, and are not standard on all models; the names of lighters shown indicate the makes supplied to various car makers.
Cus—Cusco Products Corp., Bridgeport, Conn
GR—Grand Rapids Metalcraft Corp., Grand Rapids, Mich.
NE—North East Appliance Corp., Rochester, N. Y.
Cuno—Cuno Engineering Corp., Meriden, Conn.

Passenger Car Equipment and Accessories

NAME AND MODEL	Speedometer	Clock	Fuel Gauge on Dash	Lock	Spark Plugs	Battery	Heat Indicator	*Cig. Lighter	Smoking Set	Vanity Set	Make of Body Finish Used	Stop Light	Parking or Side Light	Windshield Wings	Heater	Front Bumper	Rear Bumper	Wire Wheels	Shock Absorber
Auburn 8-85	Ste	Wal	K-S	Ele	Cha	USL	Mot-M	Cas	GR	—	Mur	Ind	Ind	—	*Gla	Yes	Yes	Day	Lov
Auburn 6-85	Ste	Wal	K-S	Ele	Cha	USL	Mot-M	Cas	—	—	Mur	Ind	Ind	—	*Kel	Yes	Yes	Day	Lov
Auburn 125	Ste	Wal	K-S	Ele	Cha	USL	Mot-M	Cas	GR	—	Mur	Ind	Ind	—	*Gla	Yes	Yes	Day	Lov
Austin	NE	—	K-S	BS	Cha	USL	—	—	—	—	Duc	—	—	—	—	Cen	Cen	—	Own
Blackhawk 6	Ste	Wal	Mot-M	DR	Cha	Pre	Mot-M	Cas	Lin	Lin	Val	Ind	Ind	Kok	—	Buck	Buck	K-H	Lov
Blackhawk 8	Ste	Wal	Mot-M	DR	Cha	Pre	Mot-M	Cas	Lin	Lin	Val	Ind	Ind	Kok	—	Buck	Buck	K-H	Lov
Buick 8-50	AC	—	K-S	Her	AC	**Opt	AC	—	Tern	—	Duc	Gui	Gui	—	—	—	—	K-H	Lov
Buick 8-60	AC	—	K-S	Her	AC	**Opt	AC	—	Tern	—	Duc	Gui	Gui	—	—	—	—	K-H	Lov
Buick 8-80	AC	—	K-S	Her	AC	**Opt	AC	—	Tern	—	Duc	Gui	Gui	—	—	—	—	K-H	Lov
Buick 8-90	AC	—	K-S	Her	AC	**Opt	AC	Cas	Tern	Tern	Duc	Gui	Gui	—	—	—	—	K-H	Lov
Cadillac	AC	Jag	Mot-M	DR	AC	Ex	AC	Cas	Tern	Tern	Duc	Hal	Hal	—	*Kel	Eat	Eat	K-H	Lov
Cadillac 452	AC	Jag	Mot-M	DR	AC	Ex	AC	Cuno	Tern	Tern	Duc	Hal	Hal	—	*Opt	Eat	Eat	Buffalo	Lov
Chevrolet	AC	—	AC	DR	AC	*Var	AC	—	Tern	-	Duc	Gui	Gui		*Own	†Own	Own	K-H	—
Chrysler 80	NE	Ster	Mot-M	Ele	AC	Wil	Mot-M	Cas	AWS	AWS	Duc	Hal	Hal	Per	—	NM	NM	MotoW	Hou
Chrysler 70	NE	*Wal	Mot-M	Ele	AC	Wil	Mot-M	Cas	AWS	AWS	Duc	Hal	Hal	Per	—	NM	NM	MotoW	Lov
Chrysler 66	NE	*Wal	Mot-M	Ele	AC	—	Mot-M	Cas	—	—	Duc	Hal	Hal	—	—	—	—	‡	—
Cord Front Drive	Ste	No	Moto-M	Dr	Cha	USL	Ster	Cas	GR	No	Mur	Ind	Ind	No	No	Alloy	Alloy	Day	Hou
De Soto 6	NE	—	Mot-M	Sha	AC	Wil	—	—	VS	VS	Duc	Hal	Hal	—	—	Yes	Yes	MotoW	Lov
De Soto 8	NE	—	Mot-M	—	AC	Wil	Mot-M	—	VS	VS	Duc	Hal	Hal	—	—	Yes	Yes	MotoW	Lov
Dodge DD	NE	—	Mot-M	—	AC	Wil	—	—	VS	VS	—	Hal	—	—	—	Yes	Yes	†Budd	Lov
Dodge 8	NE	—	Mot-M	—	AC	Wil	Mot-M	—	VS	VS	—	Hal	—	—	—	Yes	Yes	MotoW	Lov
Durant 6-14	NE	No	Mot-M	Ele	AC	USL	Mot-M	No	—	—	—	Cor	—	—	—	Eat	Eat	MotoW	Mon
Durant 6-17	NE	No	Mot-M	Ele	AC	USL	Mot-M	GR	—	—	—	Cor	—	—	—	—	—	MotoW	Mon
Elcar 6-75	Ste	—	Mot-M	Sha	Cha	USL	Mot-M	Cas	—	—	Mur	Hal	Hal	—	—	Ste	Ste	K-H	Gab
Elcar 8-95	Ste	—	Mot-M	Sha	Cha	USL	Mot-M	Cas	—	—	Mur	Gui	Gui	—	—	Ste	Ste	K-H	Gab
Elcar 8-96	Ste	Borg	Mot-M	Sha	Cha	USL	Mot-M	Cas	—	—	Mur	Hal	Hal	—	—	Ste	Ste	K-H	Gab
Elcar 8-130	Ste	Borg	Mot-M	Sha	Cha	USL	Mot-M	Cas	—	—	Mur	Hal	Hal	—	—	Ste	Ste	K-H	Gab
Elcar 140	Ste	Borg	Mot-M	Sha	Cha	USL	Mot-M	Cas	Yes	—	Mur	Hal	Hal	—	—	Ste	Ste	K-H	Gab
Essex 6	Ste	—	Mot-M	Ele	AC	Ex	Mot-M	—	—	—	—	JB	JB	—	—	Own	Own	MotoW	Mon
Ford A	*Var	—	Own	Ele	Cha	Own	—	—	—	—	—	Yes	—	—	—	—	—	Own	Hou
Franklin 145-147	NE	*Jag	K-S	Yal	Cha	USL	—	Cas	GR	GR	*Duc	Cor	Cor	—	Kel	Gen	Gen	MotoW	Lov
Gardner 150	Ste	*Borg	Mot-M	DR	Cha	Pre	Mot-M	Cas	VS	VS	†Ditz	—	Cor	—	—	—	—	MotoW	Lov
Gardner 140	Ste	*Borg	Mot-M	DR	Cha	Pre	Mot-M	Cas	VS	VS	†Ditz	—	Cor	—	—	CG	CG	MotoW	Lov
Gardner 136	Ste	*Borg	Mot-M	DR	Cha	Pre	Mot-M	Cas	VS	VS	†Ditz	—	Cor	—	—	CG	CG	MotoW	Lov
Graham Stan. 6	NE	—	K-S	Her	Cha	Wil	Mot-M	—	GR	GR	—	Hal	Hal	—	—	Ste	Ste	MotoW	Lov
Graham Sp. 6	NE	—	K-S	Her	Cha	Wil	Mot-M	—	GR	GR	—	Hal	Hal	—	—	Ste	Ste	MotoW	Lov
Graham Stan. 8	NE	—	K-S	Her	Cha	Wil	Mot-M	—	GR	GR	—	Hal	Hal	—	—	Ste	Ste	MotoW	Lov
Graham Sp. 8	NE	—	K-S	Her	Cha	Wil	Mot-M	—	GR	GR	—	Hal	Hal	—	—	Ste	Ste	MotoW	Lov
Graham Cust. 8	NE	*Ster	K-S	Her	Cha	Wil	Mot-M	Cas	GR	GR	—	JB	JB	—	—	Ste	Ste	MotoW	Hou
Hudson 8	Ste	—	Mot-M	Ele	AC	Ex	Mot-M	—	—	—	—	Hal	Hal	—	—	Own	Own	MotoW	Gab
Hupmobile Cen. 6	Ste	Wal	Mot-M	Ele	Cha	Wil	Mot-M	Cas	VS	—	Val	Hal	Hal	—	—	—	—	K-H	Gab
Hupmobile Cen. 8	Ste	Wal	Mot-M	Ele	Cha	Wil	Mot-M	Cas	VS	—	Val	Hal	Hal	—	—	—	—	K-H	Gab
Hupmobile U	Ste	Wal	Ster	Ele	Cha	Wil	Mot-M	Cas	VS	—	Val	Hal	Hal	—	—	—	—	K-H	Gab
Hupmobile H	Ste	Wal	Ster	Ele	Cha	Wil	Mot-M	Cas	VS	-	Val	Hal	Hal	—	—	—	—	K-H	Gab
Hupmobile C	Ste	Wal	Mot-M	Ele	Cha	Wil	Mot-M	Cas	VS	—	Val	Hal	Hal	—	—	—	—	K-H	Gab
Jordan Mod. 8 G	Ste	Ster	Mot-M	Her	Cha	Wil	Mot-M	Cas	GR	—	Dit	Ind	JB	—	—	Cen	Cen	K-H	Gab
Jordan Mod. 8 T	Ste	—	Mot-M	Her	Cha	Wil	Mot-M	—	VS	—	Dit	Ind	Ind	—	—	Cen	Cen	K-H	Gab
La Salle	AC	Jag	Mot-M	DR	AC	Ex	AC	Cas	Tern	Tern	Duc	Hal	Hal	—	*Kel	Eat	Eat	K-H	Lov
Lincoln 8	NE	Tho	K-S	Her	Cha	Ex	Mot-M	Cas	Cuno	Yes	Duc	Own	Own	Own	—	Bif	Bif	Own	Hou
Mar.-Roosev'lt 8	Ste	—	Mot-M	DR	Cha	Nat	—	—	—	—	Val	Vic	Vic	—	—	Ste	Ste	†Budd	Lov
Marmon Eight-69	NE	—	Mot-M	DR	Cha	Nat	Mot-M	—	GR	—	Val	Cor	—	Kok	—	CG	CG	†Budd	Wahl
Marmon Eight-79	NE	—	Mot-M	DR	Cha	Nat	Mot-M	Cas	—	GR	Val	Cor	—	Kok	—	CG	CG	†Day	Wahl
Marmon Big 8	NE	*Ster	Mot-M	DR	Cha	Nat	Mot-M	Cas	—	GR	Val	Cor	—	Kok	—	CG	CG	†Day	Wahl
Nash Tw. Ign. 8	AC	Borg	K-S	DR	AC	USL	Mot-M	Yes	GR	GR	Duc	Hal	Hal	—	—	Eat	Eat	MotoW	Lov
Nash Tw. Ign. 6	AC	—	K-S	DR	AC	USL	Mot-M	—	AWS	—	Duc	Hal	Hal	—	—	Ste	Ste	MotoW	Lov
Nash Single	AC	—	K-S	DR	AC	USL	AC	—	—	—	Duc	JB	JB	—	—	Ste	Ste	MotoW	Lov
Oakland 8	NE	—	K-S	DR	AC	Wil	—	—	Tern	Tern	Duc	Gui	Gui	—	—	Own	Own	MotoW	Lov
***Oldsmobile**	AC	—	K-S	DR	AC	Wil	AC	—	Tern	—	Duc	Gui	—	—	—	Own	Own	MotoW	Lov
Packard 726-733	NE	Jag	K-S	BS	Cha	Pre	Mot-M	Cas	Own	Yes	Val	Hal	Hal	†Bif	Kel	Cen	Yes	MotoW	Own
Packard 740-745	NE	*Jag	K-S	BS	Cha	Pre	Mot-M	Cas	Own	Yes	Val	Hal	Hal	†Bif	Kel	Cen	Yes	MotoW	Own
Peerless Stand. 8	AC	Ster	Mot-M	BS	Cha	Wil	Mot-M	Cas	GR	No	Val	Gui	—	o	No	Cen	Cen	†Budd	Gab
Peerless Mast. 8	AC	Ster	Mot-M	BS	Cha	Wil	Mot-M	Cas	GR	No	Val	Gui	—	—	—	Eat	Eat	Day	Gab
Peerless Cust. 8	AC	Ster	Mot-M	BS	Cha	Wil	Mot-M	Cas	GR	No	Val	Gui	—	—	—	Eat	Eat	Day	Gab
Pierce-A., C, B, A	NE	Wal	Mot-M	Her	Cha	Wil	Mot-M	NE	VS	VS	—	Aga	Aga	—	—	Eat	Eat	K-H	Hou
Plymouth	NE	—	Mot-M	Sha	AC	Wil	—	—	—	—	Duc	Hal	Hal	—	—	Gen	Gen	‡	—
Pontiac	AC	—	K-S	DR	AC	Pre	—	—	Tern	—	Duc	Gui	Gui	—	—	Own	Own	MotoW	Lov
Reo 15, 20, 25	Ste	—	K-S	*DR	Cha	Wil	AC	—	VS	VS	—	†Gui	—	—	—	§CG	§CG	MotoW	*Lov
Ruxton	Ste	Jag	Mot-M	Her	AC	Wil	Mot-M	Own	Own	Own	Duc	Cor	Wood	Own	—	CG	CG	—	Hou
Studebaker Six	Ste	—	K-S	Yal	Cha	Wil	Mot-M	—	—	—	—	Ind	—	—	No	Eat	Eat	K-H	Lov
Studebak'r Dict. 8	Ste	—	K-S	Her	Cha	Wil	Mot-M	—	—	—	—	Ind	—	—	—	Eat	Eat	K-H	Lov
Stud. Com. 8-70	Ste	—	K-S	Her	Cha	Wil	Ste	—	—	—	—	Gui	—	—	—	Ste	Ste	K-H	Hou
Stud. Pres. 8-80	Ste	NH	K-S	Her	Cha	Wil	Ste	Cas	*Var	—	—	Gui	—	—	—	Ste	Ste	K-H	Hou
Stud. Pres. 8-90	Ste	NH	K-S	Her	Cha	Wil	Ste	Cas	—	—	—	Gui	Gui	—	—	Ste	Ste	K-H	Hou
Stutz	Ste	Wal	Mot-M	DR	Cha	Pre	Mot-M	Cas	Lin	Lin	Val	Ind	Ind	Kok	—	Buck	Buck	K-H	Gab
Viking 8	AC	—	K-S	DR	AC	Wil	AC	—	VS	VS	Duc	Gui	—	—	—	Own	Own	MotoW	Lov
Whippet 96 A	NE	—	—	Ele	Cha	USL	—	—	—	—	—	Yes	—	—	—	—	—	*K-H	Wat
Whippet 98 A	NE	—	—	Ele	Cha	USL	—	—	—	—	—	Yes	Yes	—	—	—	—	*K-H	Wat
Willys 6-98 B	NE	—	Mot-M	Yes	Cha	USL	Mot-M	—	—	—	—	Yes	Yes	—	—	—	—	*K-H	Mon
Willys 8-80	NE	No	Mot-M	Yes	Cha	USL	Mot-M	—	—	—	—	Yes	Yes	—	—	—	—	*K-H	Mon
Willys-Knight 87	NE	—	Mot-M	Ele	Cha	USL	Moto-M	—	—	—	—	Yes	Yes	—	—	—	—	K-H	Mon
Willys-K. 66B	NE	—	Mot-M	Ele	Cha	USL	Mot-M	—	VS	VS	—	Yes	Yes	—	—	—	—	†Budd	Wat
Windsor 6-69	Ste	—	Mot-M	Sha	Cha	Nat	Mot-M	—	—	—	Gli	JB	JB	—	—	†Yes	†Yes	†Budd	Lov
Windsor 6-72-77	Ste	—	Mot-M	DR	Cha	USL	Mot-M	—	Yes	Yes	Gli	JB	JB	—	—	†Yes	†Yes	†Budd	Lov
Windsor 8-85	Ste	—	Mot-M	Joh	Cha	USL	Mot-M	—	Yes	Yes	Gli	JB	JB	—	—	†Yes	†Yes	†Budd	Lov
Windsor 8-92	Ste	—	Mot-M	DR	Cha	USL	Mot-M	—	Yes	Yes	Gli	JB	JB	—	—	†Yes	†Yes	†Budd	Lov

SMOKING AND VANITY SETS

AWS—Art Metal Works, Newark, N. J.
Gli—Grand Rapids Metalcraft Corp., Grand Rapids, Mich.
Lin—Linden
VS—Van Sicklen Corp., Elgin, Ill.
*Extra equipment on Reo Model 15.
Tern—Ternstedt Mfg. Co., Detroit, Mich.
Cuno—Cuno Engineering Corp., Meriden, Conn.
*Var—Various makes.

BODY FINISH

Ditz—Ditzler Color Co., Detroit, Mich.
Duc—E. I. du Pont de Nemours & Co., Philadelphia.
Gli—Glidden Co., Cleveland, O.
Mur—Murphy Varnish Co., Newark, N. J.
Val—Valentine & Co., New York city.
*Various other lacquers used.
†Also Gli.

STOP AND PARKING LIGHTS

Cor—Corcoran Lamp Co.
Vic—Cincinnati-Victor Co., Cincinnati, O.
Aga—Federal Pressed Steel Co., Chicago.
Gui—Guide Lamp Corp., Anderson, Ind.
Hal—C. M. Hall Lamp Co., Detroit, Mich.
Ind—Indiana Lamp Corp., Connersville, Ind.
Ryan—Eco Sales Corp., Detroit.
Ste—Stover Signal Engineering Co., Racine, Wis.
JB—The Jno W. Brown Lamp Mfg. Co., Columbus, O.
Wood—Woodlite, Ltd., Los Angeles Cal.
†Reo Model 15 uses Hall.

WINDSHIELD WINGS

Kok—Kokomo Automotive Mfg. Co.
*Extra equipment on the Reo 15.
Per—Perfection Co., Chicago.
Bif—Biflex—Oakes Products Corp., No. Chicago, Ill.
†Not standard equipment.

HEATER

Gla—Gladiator Mfg. Co., Auburn, Ind.
Kel—Kelch; made by Grand Rapids Metalcraft Corp., Grand Rapids, Mich.
Per—Eaton Axle & Spring Co., Cleveland.
Wahl—Wahl Company, Chicago, Ill.
*Special equipment.
*Optional.

BUMPERS

Alloy Steel Spring & Axle Co., Jackson, Mich.
Bad—Badger Mfg. Corp., Milwaukee.
Bif—Biflex Corp., Waukegan, Ill.
Buck—See Cen.
Cen—Central Brass & Fixture Co., Springfield, O. Also makers of Buckeye bumpers.
CG—CG Spring & Bumper Co., Detroit.
Eat—Eaton Axle & Bumper Co., Cleveland.
Gen—General Spring and Bumper, Detroit, Mich
New Method Sales Co., Allegan, Mich.
Ste—Stewart-Warner Speedometer Corp., Chicago.
†Extra equipment.
*Also using Eat.
‡Extra equipment on Reo Model 15.

WIRE WHEELS

Budd—Budd Wheel Co., Detroit, Mich.
MotoW—Motor Wheel Corp., Lansing, Mich.
Day—Dayton Wire Wheel Co., Dayton, O.
K-H—Kelsey-Hayes, Detroit, Mich.
Buffalo—Wire Wheel Corporation of America, Buffalo, N. Y.
*On some models.
**Using both Budd and Kelsey-Hayes.
†Not standard equipment.
‡Using both Kelsey Hayes and Motor Wheel Corp

SHOCK ABSORBERS

Gab—The Gabriel Company, Cleveland.
Hou—Houde Engineering Corp., Buffalo, N. Y.
Lov—Delco Products Corp., Dayton, O.
Mon—Monroe Auto Equip. Mfg. Co., Monroe, Mich.
Wahl—Wahl Co., Chicago, Ill.
Wat—John Warren Watson Co., Philadelphia.
*Extra equipment on Reo 15.

Bus Field Activities

Sandyville, O, Sept. 2.—E. E. Polen, Sandyville, Tuscarawa county, has been authorized by the public utilities commission to sell his New Philadelphia-Loudonville bus line to the Inland Stages, Inc., of Mount Vernon, O.

Elizabeth, N J., Sept. 2.—Gross receipts for the fourteen bus lines operating in Elizabeth show a decrease of 16 per cent. during July under the mark of January, which was the highest of 1930, it is shown in the board of works compilations of franchise tax payments. The figures for gross receipts during each of the first seven months of 1930 follow: January, $152,923.94; February, $135,173.95; March, $146,053.01; April, $140,217.18; May, $140,990.22; June, $133,533.38; July, $128,166.12.

Carrollton, O., Sept. 2.—The West Penn Bus System, operating between Pittsburgh and Detroit via this city, has established a new line from here to Wellsville. Mechanicstown and Salineville are stops on the new route.

Newark, N. J., Sept. 2.—Public Service Co-ordinated Transport, which recently joined with the Ludington-Philadelphia Flying Service, Inc., in the operation of an airplane-bus service between Philadelphia and Atlantic City, reports greatly increased business. Transport carries passengers from its Jersey Bus Terminal in Philadelphia to Central Airport, Camden, where passengers board the planes and are taken to Atlantic City. Buses are operated from Bader Field in Atlantic City directly to the Public Service Union Bus Terminal in that city. When the service was inaugurated it was planned to operate only on Saturdays and Sundays. However, the demand for service necessitated a daily schedule.

Richmond, Va., Sept. (UTPS).—A charter has been granted by the State Corportaion Commission to S. L. Echard & Son, pioneer bus operators in the Staunton, Va., locality, to operate a bus service between Staunton and Goshen, a distance of about thirty-six miles.

Longview, Wash., Sept. 2.—Sale of the Northwest Transit Company to B. M. Evans of Tacoma has been announced here by company officials. The company operates passenger and express motor bus service between Longview and Ryderwood. Gabe Wallis, former Longview business man, will be manager of operations for the line.

Boston, Mass., Sept. 2.—A new bus garage, to cost about $166,000, is soon to be erected by the Boston Elevated Railway. It will have electrically operated doors, spray washers, electrically driven gasoline pumps and specially built drop floors. It will have an area of 20,000 square feet and will accommodate fifty-six buses. As the buses enter the building they will be run through a spray wash designed to clean them in two minutes. An auxiliary two-story building will also be erected for stockrooms, offices, oil and battery charging rooms and employees' quarters. The main building will be so constructed that two additional units can be put up at any time.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Cumulative New Commercial Car Registration Statistics, July, 1930

Returns for today: Arizona, Nebraska, Nevada, New Jersey, Ohio, Oklahoma, Pennsylvania and Vermont.

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers.

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies. **Commercial Car Registrations do not include buses.**

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Alabama			136		1			1	178	5	4	2			3							2	1		1	334	Alabama
Arizona			26		7				86	2	3	1			1		1		4	2		1				134	Arizona
Arkansas		2	236		4		1		310	6	38	1			1						2	6			1	608	Arkansas
Conn.	2	9	109	7	32	2		5	216	16	21	20	2	1	18			2	14	4		3	1	1	11	496	Conn.
Delaware	1	2	32		2				56	7	6				1				1		1	1	1			111	Delaware
Florida		7	99		3	1			233	2	19	3			3		1					5	2			378	Florida
Idaho			52		8				92	13	12				4	1	1					1	1	2	2	189	Idaho
Illinois	5	16	516	41	50		2	14	874	34	110	17	2		19	2		8	1		8	21	21		60	1821	Illinois
Louisiana			135		4				220	6	18	2			2		1					6			7	401	Louisiana
Maryland	5	8	105	11	6		3	1	244	5	22	20			4	2		2	6	2		16	1	1	5	469	Maryland
Michigan	1		213	4	19	1	2	18	725	22	48	5	1		19	4	4	3	3	1	4	6	8	2	15	1128	Michigan
Minnesota		3	255	11	22	1	7	4	502	21	94	2	1		18		1			1	5	2	21		11	982	Minn.
Missouri	5	8	269	9	25	1	3	4	358	14	70	13	3		8		1	2	1	1	5	2	3		17	822	Missouri
Montana			68		3	1	1	1	123	3	33				5		1				2	1	1		*	243	Montana
Nebraska			275	3	15		1	1	367	7	87	2	2		4					1		2	9	1	8	785	Nebraska
Nevada			17		8		1		46	2	3				2					1	1	1			2	84	Nevada
N. Hamp.		1	39	5	6				121	4	5	7			5		2		1	1		1	1		3	202	N. Hamp.
New Jersey	14	30	265	13	42	3	3	7	616	37	34	27	1	3	18	2	2	4	13	4	2	29		2	30	1201	N. Jersey
N. Carolina	1		224	1	11		3	3	364	4	14	2	2		2						1	2	6		4	644	N. Car.
N. Dakota			50	3	2		1		74	1	46				5		2						2			186	N. Dakota
Ohio	14	13	345	10	59	5	1	9	901	42	121	12	2	4	22	1	5	1	11	4	9	55	15	2	53	1716	Ohio
Oklahoma	1	5	368		25		3	13	471	21	71	12			5		6			2	3	8	10		2	1026	Oklahoma
Oregon	4		117		14	5	1	11	417	15	38	17	1		7	3	5	4		3		14	2	2	21	701	Oregon
Penn'vania	29	23	413	8	102	6	9	14	1088	36	129	63	5	9	39	4	3	5	32	7	16	31	4	5	28	2108	Penna.
Rh. Island	3	3	41	2	4		2	1	124	9	5	1			3			1	1	1		2				203	R. Island
S. Carolina		1	125					2	171	3	10											1			12	325	S. Car.
S. Dakota		3	71	6	7		1		126	3	50				5		1				2		5		1	281	S. Dakota
Utah			48		4		1		127	4	6	1			1										4	196	Utah
Vermont		1	29		6				73	2	42	1			6				2			1		1		164	Vermont
Wash'ton			203		13		4		443	33	45	7			13		7	2		2		20	4		34	830	Wash'ton.
W. Virginia		6	144	3	17			2	202	17	42			3	8	1	3			2		2	4		8	464	West Va.
Wisconsin		8	564	23	40	2	4	11	784	37	125	4		2	23			4	8	4	9	3	24	1	21	1701	Wisconsin
Dist. of Col.	5		27	3	2				105	6	7				1			1				3			5	165	D. of Col.
Totals	90	149	5616	163	563	28	54	122	10837	439	1378	242	22	22	275	20	47	39	98	43	70	248	147	20	366	21098	Totals
Ala., 1929		2	386		12		1	1	254	1	25				1						13	6			2	704	Ala., 1929
Ariz., 1929			71		13		1		96	12	6	1			4		3			2	2	2				213	Ariz., '29
Ark., 1929		5	400		26		8		513	12	83	1			4		1			4	15	3			11	1086	Ark., 1929
Conn., '29	5	9	161	15	52		3	8	234	27	33	48		5	43		1	1	15	3	13	6		4	14	700	Conn., '29
Del., 1929	2	1	57		4				67	10	10				1						1			1		154	Del., 1929
Fla., 1929		3	168		19				351	10	17	1			8					2	3	7				589	Fla., 1929
Idaho, '29			75	1	10		2		64	5	10				10		2				2	4			2	187	Idaho, '29
Ill., 1929	12	14	791	88	159		27	12	1149	49	195	31		2	46	1		10	3		51	23			124	2787	Ill., 1929
La., 1929		6	326		18				386	14	70	7			3						4	5		1		840	La., 1929
Md., 1929	17	6	179	7	28		2	2	282	19	51	15			28		1	3	3		5	15		1	25	689	Md., 1929
Mich., '29	3	4	621		85		8	29	1303	92	108	16		3	69	4	3			1	41	5		3	31	2429	Mich., '29
Minn., 1929			339	3	48		8	11	471	28	95	4			25		1			4	26	15			20	1098	Minn., '29
Mo., 1929	4	6	325	12	53		5	2	431	31	48	14			14	1	1	3		2	26	5			5	988	Mo., 1929
Mont., 1929			51		12		2		131	4	27				4	1	1			2	3	4				242	Mont., '29
Neb., 1929			497	6	29		10	2	409	21	105				7	1	5			4	31	3			12	1142	Neb., 1929
Nev., 1929			24		8		3	1	80	4	5	1			1		2								2	131	Nev., 1929
N. H., 1929	1	6	71	1	18		1	2	133	9	15	3			12		1	1	1	1	3	2			1	282	N. H., '29
N. J., 1929	26	25	425	10	124		16	19	780	68	37	64			57	1	3	7	8	12	13	33		8	62	1798	N. J., 1929
N. C., 1929	2	3	461		50		6		495	15	25	7			2	1			3	3		8			10	1091	N. C., 1929
N. Dak., '29			100	1	13		5	1	98	5	70				2						1				2	298	N. D., 1929
Ohio, 1929	27	36	608	7	126		20	13	1074	85	168	19		3	61	1	3	9	4	13	62	48		4	64	2455	Ohio, '29
Okla., '29	2	15	745	3	54		13	6	741	25	181	8			23		1		1	4	32	12		2	7	1875	Okla., '29
Ore., 1929			312		30		6	14	437	22	61	13			23	1	12	8		2	8	12			17	978	Ore., 1929
Penn., '29	69	38	716	19	223		37	19	1195	80	134	51		10	87		5	35	32	8	54	54		5	51	2922	Pa., 1929
R. I., 1929	3	1	68		26		1	2	88	17	6	13			29		3	4	5	2	3	3			5	279	R. I., 1929
S. Car., '29		16	200		9		10	3	224	5	12	2			1	1	1		1	1	4	2			4	496	S. C., 1929
S. Dak., '29			203	1	19		2	1	175	12	103	1			12		1			3	10	1		1	2	547	S. D., '29
Utah, 1929			53		13				101	8	7				5		2			1	2					192	Utah, '29
Vt., 1929		1	33	1	7		3	1	49	5	15	18			3						1	2			3	142	Vt., 1929
Wash., 1929			337		48		11	5	580	23	71	8			29	3	11			5	15	24		1	40	1211	Wash., '29
W. Va., '29		8	202	3	45		2	3	260	18	48			2	16	1	1		5	3	5	5		1	7	635	W. Va., '29
Wis., 1929	1		499	15	64		10	8	746	39	121	5		2	54		3	17	8	2	35	8		1	24	1662	Wis., 1929
D. of C., '29	1	2	35	5	2				137	6	4	1			4				2		3	14			3	219	D. C., '29
Totals	175	207	9539	198	1447	*	223	165	13534	781	1966	352	*	27	688	17	68	98	91	84	487	331	*	33	550	31061	Totals

*Not in production at that time.

DEALER SERVICE WORK SPOTTY IN SECTIONS OF N. Y. AND PENNA.

JAMESTOWN, N. Y., Sept. 2.—**While conditions in repair shops in certain sections of southwestern New York and northwestern Pennsylvania continue spotty, in the more urban communities, where the industrial status has shown a revival, the larger shops have taken on additional help and some are again featuring twenty-four-hour repair service.**

Many dealers late last year inauguarted twenty-four-hour service for repairs, but with the low industrial conditions prevalent during the first part of 1930, it was found inadvisable to continue night work, except for repairs to commercial vehicles. A return of these large shops to the full twenty-four-hour basis is considered indicative of the waning industrial depression throughout the territory. This is especially true in the cities of Jamestown and Dunkirk, N. Y., and Warren and Erie, Pa.

The aggressive dealers in the territory foresee a bright future and are going ahead with plans for expansion, some of which were announced several months ago, but actual consummation of the work was held in abeyance.

In Jamestown and the southwestern part of New York state, the most highly enlightening feature of the month is the return of the wood furniture industries to a more stable operating basis. The metal factories, too, have stepped up production considerably and it is thought that the low point in the industrial status has been passed. There have been, during the past month, more cars taken in for complete overhauling jobs than at any time since the first of the year. Minor repair work, also, has recorded a satisfactory increase. Owners, however, continue to confine their repair orders to necessary work.

In Erie, Pa., and the northwestern portion of the Keystone state, there are three factors which have resulted in better volume of service work. In the first place manufacturing concerns engaged in production of oil field equipment have been operating on better schedules, and secondly, the largest industry in the section, the Erie plant of the General Electric Company, is preparing to resume full-time operations September 2, giving employment to close to 8,000 men. Revival of building activity has also reflected favorably on the volume of business in repair shops of legitimate dealers. In Meadville, Pa., the $5,000,000 plant of the American Rayon organization is scheduled to begin operations in September.

The Third and Lafayette Streets Garage, Inc., Jamestown, Hudson-Essex distributor, and the Star Garage Company, Erie, distributor for the same makes of cars, has shown a marked increase in the volume of service work this month with indications of even better business in September. The same is true of the firm of C. C. Smith & Son, Inc., Hudson dealership in Warren, Pa.

Heavy overhauling work and body rejuvenating orders have been more plentiful at the various Ford agency repair shops in both states.

Chevrolet service shops in Jamestown and Erie, that is, the distributors' service stations, have recorded such increases in business as to warrant a return of the twenty-four-hour service.

Other popular car dealerships report volume of business in repair shops as improving and, taken as a whole, it is expected that a fall business volume of entirely satisfying proportions will be attained.

DEALER DOINGS

Canton, O., Sept. 2 — Occupying a $250,000 salesroom the Quality Motor Car Company, Inc., under the direction of P. D. Hardy, president, held its formal opening this week. This firm is an exclusive dealer in Peerless cars here. The building was completed in June, 1926 and was originally leased by the Peerless Auto Sales Company. It is a three-story structure and occupies approximately 45,000 square feet of floor space. The entire week is being given over to the display of the complete line of new Peerless cars.

Fort Dodge, Ia., Sept. 2.—The Arnold Motor Company, 525 1st Ave., South, has resumed its dealership contract for the Packard motor cars, W. G. Arnold, president of the company, announced this week. Some months ago the contract was surrendered. Service department was maintained and the firm is now showing complete line of the new models.

Buffalo, N. Y., Sept. 2.—The Overland-Knight Company, Inc., with headquarters at 1253 Main St., has taken the distributorship in western New York for the Austin car. Sales will be handled in conjunction with the firm's distributorship of Willys-Knight and Whippet.

Long Beach, Cal., Sept. 2.—Nash-Niccolls Company, Nash dealer, 16th and American Avenues, has been conducting a used-car sale for several months that has proved most profitable and has aided materially in moving used-car stocks quickly.

The plan in brief is best described by the large sign displayed in one of the sales windows. It reads: "Customers Co-operative Sale. Buy your used car here and also get a $5 merchandise order on the Emporium for every $100 value used-car purchased. But your used car here and save money."

CUMULATIVE NEW PASSENGER CAR

Returns for today: Arizona, California, Indiana, Iowa, Mas

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising desiring county, city or town lists, or lists of owners in any given

Some of this data has been published previously, but it is

	Auburn	Austin	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Alabama		3		29	3	576	13		5	19		13	867			11	8	9		4	3
Arizona	1			30		132	12	1	19	23	5	5	299	1		7	2	8		1	1
Arkansas	5	4		49	5	1337	95	1	29	105	26	31	1912	3		24	6	8		11	2
California	83	105		412	97	3208	365	22	349	389	382	155	7478	37	8	280	147	201		55	27
Conn'ticut	21	21		277	28	696	119	4	136	119	15	119	1464	16		81	65	76	8	36	3
Delaware	2	2		33	5	152	23		6	4	13	12	293			1	6	10		1	
Florida	11	16		48	6	655	59	2	19	34	3	49	1108	6		44	22	20		8	2
Idaho	1	8		26		221	20		16	19	19	11	371	1		16	6	4			
Illinois	75	34	3	562	72	3495	411	41	269	346	103	242	7270	50	19	175	153	280	6	66	27
Indiana	24	19		141	22	1018	84	10	116	108	31	108	2167	5		62	54	40	4	11	9
Iowa	13	15		90	7	2021	119	3	39	149	79	92	2709	5		66	45	54		9	4
Louisiana	5	12		50	8	697	34	1	45	58	8	25	1123	4	1	17	14	13		1	1
Maryland	4	12		123	21	868	79	2	19	36	15	46	1375	8		40	23	39		12	4
Mass'setts	33	40		339	66	1567	220	7	84	292	56	377	4478	28	3	104	130	141	10	42	18
Michigan	9	82		468	58	1586	171	8	84	145	63	244	6570	4	2	110	117	69	3	35	12
Minn.	16	33		140	14	1777	158		47	105	46	102	2772	4	2	93	53	79		26	11
Missouri	11	35		133	8	1242	91	2	47	125	22	95	1769	8	7	67	29	35		22	15
Montana	5			21	3	322	34		21	38	26	28	426	2		14	15	12		2	1
Nebraska	5	3		69	1	1041	84	2	17	86	22	28	1576	1	1	28	10	14		2	
Nevada	8	5		28	1	110	38		12	29	8	12	207	1	2	3	11	6		3	1
N. Hamp.	10			40	4	221	28		14	21	11	29	473			17	16	7	1	2	1
N. Jersey	65	66		554	65	1543	272	4	118	202	74	199	3731	27	2	121	111	118	11	48	15
N. Carolina	3	12		69	7	958	92	1	20	66	6	44	1854	2		27	30	6		12	3
N. Dakota	1	2		12		352	17		10	19	13	6	497			12	4	1			
Ohio	57	91		387	80	2435	266	10	224	254	101	268	5558	32	6	176	124	159	23	53	21
Oklahoma	6	13		291	15	1973	113	5	62	238	48	47	2742	8		50	27	19		14	2
Oregon	4	34		125	1	607	62	1	55	72	108	63	1256	5	3	75	42	54		5	2
Penna.	75	145		651	87	3270	710	7	332	516	174	393	6660	49	8	331	229	328	6	93	15
Rh. Island	7	1		91	9	306	71	1	69	36	8	34	722	6	2	22	21	21		12	2
S. Ca'lina		4		28		524	36		23	18	3	18	895	3		9	7	9		2	
S. Dakota	1	3		14		643	29		13	58	40	20	897			14	17	13		2	
Utah	5	10		33	3	224	11	3	16	20	21	25	430	5		16	10	2		2	
Vermont	4	5		32	1	154	35	2	6	17	5	28	298	1		14	14	14		5	1
Wash.	20	9		189	10	832	148	4	94	90	120	60	1885	10	1	53	30	54	5	8	6
W. Va.	9	9		59	7	809	81	1	38	109	25	83	1298	2	1	71	26	23		5	2
Wisconsin	18	24		290	24	1781	165	2	109	142	85	144	2794	12		91	81	52	1	9	5
Dis. of Col.	2	18		106	9	396	47		19	29	13	25	1130	6		31	11	30	1	8	5
Total	619	895	3	6039	747	39749	4412	147	2601	4136	1797	3280	79354	352	68	2373	1716	2028	79	627	221
Ala., 1929	2			111	1	1328	51		15	71	8	137	1956	2		38	61	20		10	5
Ariz., '29	9		1	46	1	368	26		33	44	54	40	487	6		21	19	18		2	1
Ark., '29	3			122	8	1522	98		83	159	49	92	2796	6		39	22	15		11	7
Cal., '29	107		10	1104	109	4410	624		589	787	715	926	8526	67	29	511	496	220	11	120	41
Conn., '29	85		3	340	43	910	226		182	202	45	291	1606	49	3	162	103	114	3	49	10
Dela., '29	10			50	6	190	9		2	7	40	52	351	2		4	14	4		11	
Fla., '29	10			150	10	955	80		47	83	7	145	1801	13		84	71	40	7	24	4
Idaho, '29	1			64	1	379	22		23	49	94	66	526	2		22	20	1		1	
Ill., '29	256		16	1101	119	5116	655		504	893	261	1323	9072	56	18	553	560	397	12	209	72
Ind., 1929	101		4	447	27	3230	244		289	416	98	970	5676	14	7	211	294	74	16	36	19
Iowa, '29	53		3	352	15	3196	109		107	327	251	417	4706	4		142	121	72	1	26	10
La., 1929	11			126	2	1061	73		53	139	13	58	1602	1	4	45	27	22		8	6
Md., '29	14		2	194	11	1152	108		35	103	54	240	1577	14	1	81	69	49	3	16	14
Mass., '29	89		9	744	68	2145	392		206	474	111	1080	4799	98	25	257	325	185	14	139	18
Mich., '29	58		2	1279	56	4675	261		319	454	202	1554	9759	10	9	450	550	257		86	32
Minn., '29	29		2	264	4	1900	151		78	188	160	388	4611	4	3	161	125	81	5	26	6
Mo., '29	34		1	283	20	1534	133		91	174	145	348	2582	19	14	96	90	93	5	33	11
Mont., '29	10			46	3	320	35		28	56	45	86	527	7		24	34	11		5	
Neb., '29	8			215	1	1603	85		55	165	80	126	2737	2	6	51	36	22		4	7
Nev., '29	2			49	4	116	27		14	24	23	32	188	3		6	23	5	2	7	
N. H., '29	6			64		305	46		38	47	39	80	472	14		22	25	17	2	7	1
N. J., 1929	167		7	635	57	2276	431		283	380	138	770	4120	98	10	292	299	241	13	102	19
N. C., 1929	6			203	3	1630	169		84	171	46	201	3064	6		41	80	24		11	4
N. D., '29	3			50	1	468	28		32	45	39	62	968	1		28	12	5			1
Ohio, '29	151		6	790	60	5074	427		477	512	283	1545	9553	60	9	462	474	291	25	55	33
Okla., '29	27		1	411	6	2796	172		111	465	71	204	4168	21		83	83	55	2	30	9
Ore., 1929	18			219	4	950	76		49	143	246	194	1849	11	2	57	60	29		11	3
Penn., '29	192		12	950	81	4345	889		505	803	404	1743	7853	129	14	556	567	419	47	160	26
R. Isle., '29	23			102	16	432	105		67	67	23	147	579	22	2	71	45	37		31	5
S. C., '29			1	80	3	948	50		63	30	4	60	1677	5		7	32	9		8	1
S. D., '29	12			89	1	901	52		25	106	121	111	1540			38	18	35		1	
Utah, '29			1	79	3	487	26		27	66	90	102	709	2		47	26	24		2	
Vt., 1929	2			30	1	162	24		27	25	11	58	271	2		16	35	18		1	1
Wash., '29	47		4	320	8	1107	192		134	134	337	313	2365	16		94	126	66	4	10	3
W. Va., '29	8		3	137	6	1142	123		81	231	49	242	1655	4		123	54	36	4	13	10
Wis., '29	38		3	585	10	2681	254		222	318	178	682	4544	33	10	231	283	97	3	16	10
D. of C., '29	11			146	6	418	55		28	24	8	120	965	10	1	56	34	36	3	15	2
Total, '29	1609	*	91	11977	775	62232	6528	*	5006	8406	4542	15005	112237	813	167	5182	5313	3139	182	1296	391

***Not in production at that time. Marquette is now included with Buick.**

Personal Briefs

Minneapolis, Minn., Sept. 2 (UTPS).—H. H. Gould, for several years in the sales promotion business in this city, has been named manager of retail sales, and sales manager for the Northwest Nash Motors, Inc., 1201 Hennepin Ave., distributor of Nash cars in the Northwest.

Duluth, Minn., Sept. 2.—Appointment of W. A. McMillan as vice-president and general manager of the Duluth Buick Company, Buick dealer here, has been announced. Mr. McMillan was formerly manager of the Pence Automobile Company branch at Fargo, N. D., former Buick distributor in that state.

St. Louis, Sept. 2.—Arthur R. Lindburg, president of the St. Louis Studebaker distributing company, which bears his name, announces the appointment of J. B. (Jack) Ashner as director of retail sales.

Louisville, Ky., Sept. 2.—George T. Holmes, formerly manager of the Leyman Motor Company, Buick dealer and distributor here, who left that concern some months ago to enter the electrical refrigeration business, has returned to the automotive field as manager of the Graham-Paige of Louisville, Inc., located at Campbell and Broadway, this city, where he succeeds M. W. Richards, who had been with the organization since it was founded.

REGISTRATION STATISTICS, JULY, 1930

sachusetts, Nebraska, Nevada, New Jersey, Ohio, Oklahoma.

Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers section, may obtain these by addressing any of these three companies

given here complete for the convenience of our subscribers

	Marmon	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Windsor	Miscellaneous	Totals
Alabama	2	4		6	7		1	28	9	2	15		1	5	4				1,647
Arizona	1	18	5	14	4	3		15	15		30	1	3	6	15	11			688
Arkansas	7	31	10	27	4		2	115	50	3	11		1	8	11	3		1	3,937
California	82	345	104	184	292	22	47	244	249	47	648	4	13	29	125	146	15	12	16,408
Conn'ticut	27	106	58	93	81	7	19	104	104	25	119	2		10	37	27		4	4,127
Delaware	3	2	1	8	7		2	9	23		11			1	6	3			639
Florida	11	24	20	14	23		4	37	36	9	25		2	9	23	6			2,355
Idaho	1	17	2	8	1			31	14	1	16			11	8	4			853
Illinois	73	411	134	359	273	27	30	453	418	59	519		14	69	201	100	25	19	16,883
Indiana	47	69	30	113	39	5	5	201	119	10	160	4	4	22	52	9			4,922
Iowa	27	111	28	125	29	1	4	260	155	12	117		6	63	114	26		4	6,601
Louisiana	15	61	6	22	7	1	3	48	35	7	39		1	7	6	4	2		2,381
Maryland	7	55	12	62	42	2	6	122	72	9	80		2	18	32	7	15		3,269
Mass'setts	53	306	60	184	212	31	40	253	220	49	294	3	6	35	82	90	3	2	9,958
Michigan	34	91	52	232	123	4	8	332	161	52	203	1	14	29	72	23		4	11,275
Minn.	18	90	50	106	99	1	6	350	165	17	137		4	85	149	34	1		6,790
Missouri	15	93	23	104	65	1	13	170	92	15	107			37	58	11	9	1	4,577
Montana	14	37	12	24	4			60	31	10	29		3	13	29	14			1,250
Nebraska	12	31	12	49	16	1		142	61	2	70	1	3	41	52	16			3,499
Nevada	3	9	1	6	8			19	5		16			1	1	3			557
N. Hamp.	7	45	9	27	11	2	1	27	29	10	36		1	3	20	8			1,131
N. Jersey	46	264	73	245	178	22	41	178	200	34	285	4	9	22	99	73	1	8	9,128
N. Carolina	6	23	9	20	11			96	63	1	25		1	22	21	7			3,517
N. Dakota	7	15	6	20	6			48	27	1	21		2	18	18	5			1,140
Ohio	72	238	101	245	153	33	23	501	305	38	288	7	11	84	209	132	3	6	12,774
Oklahoma	9	56	22	52	66		12	149	100	6	60	1	5	42	74	10	4		6,341
Oregon	22	46	25	53	17		3	83	55	24	73		2	4	32	23		1	3,037
Penna.	97	436	151	440	314	33	51	894	385	55	448	2	23	85	295	101	17	9	17,915
Rh. Island	4	35	11	19	32	6	12	48	46	13	35	1		4	18	16		1	1,742
S. Ca'lina	3	14	5	10	6		1	47	22	2	10			2	1				1,702
S. Dakota	7	24	15	70	8		2	97	30	7	37		4	34	39	3			2,141
Utah	2	30	9	9	14		1	11	16	1	16		3	2	4				954
Vermont	2	19	12	16	6		1	30	17	4	19			11	18	4			795
Wash.	8	75	39	88	28	6	3	159	86	23	119		11	21	50	38		1	4,383
W. Va.	14	69	43	40	28		3	144	79	7	56	1	3	43	71	20			3,279
Wisconsin	22	216	76	150	55	11	9	341	231	15	163	1	11	58	163	29	1	4	7,385
Dis. of Col.	11	32	23	58	37	9	3	48	48	7	45		5	3	7	12		1	2,235
Total	791	3548	1249	3302	2306	228	356	5894	3773	577	4382	33	168	957	2216	1018	96	78	182,215
Ala., 1929	17	29	12	11	12			58	59	5	36			115		2		1	4,173
Ariz., '29	26	55	12	39	7		2	29	56	1	48			45		11	1		1,508
Ark., '29	17	73	21	42	4		3	170	167	13	43		2	165		21	1		5,774
Cal., '29	173	682	177	502	214	40	61	316	772	145	916	10	61	326		338	32	195	24,362
Conn., '29	76	237	74	141	126	13	36	156	333	69	202	7	16	207		54	1	13	6,187
Dela., '29	2	30	12	17	6	2	1	23	65	2	23		1	21		7			964
Fla., '29	12	73	32	46	22	3	6	55	121	22	41	2	3	133		23		11	4,136
Idaho, '29	7	23	8	19	4		1	48	50	3	27		2	58		11			1,532
Ill., '29	194	1135	265	883	291	81	50	813	1651	152	859	22	109	1083		224	22	806	29,833
Ind., 1929	206	337	118	593	89	13	23	451	791	31	544	15	26	763		86	1	40	16,300
Iowa, '29	67	267	49	311	34	18	2	355	519	32	196	4	17	773		60	3	8	12,627
La., 1929	17	150	16	47	16	4	2	79	185	8	43	1	2	75		17			3,913
Md., '29	24	97	32	96	24	5	10	124	269	13	92	3	8	168		43		2	4,747
Mass., '29	120	503	111	279	242	50	66	264	664	114	432	4	21	393		246	8	56	14,751
Mich., '29	150	276	116	817	136	19	29	547	1032	121	438	4	50	736		126	3	15	24,628
Minn., '29	32	186	72	234	72	7	12	437	521	22	199	3	13	616		143	2	14	10,771
Mo., '29	53	194	41	219	60	16	28	188	235	24	138	3	3	528		61	11	11	7,519
Mont., '29	20	39	10	22	6	1	1	89	64	5	34		4	99		19		1	1,651
Neb., '29	25	103	38	154	10	8	2	162	257	8	105		6	344		31	4	2	6,462
Nev., '29	7	11	3	15	8	2		17	15	4	22		3	9		5			652
N. H., '29	18	59	13	43	11	2		46	63	11	36		2	60		15		7	1,571
N. J., 1929	124	694	115	471	280	64	100	301	585	89	420	8	40	383		208	14	42	14,276
N. C., 1929	18	68	47	77	19	3		164	262	3	43		6	231		13		1	6,698
N. D., '29	21	52	8	49	7		1	77	83	1	39	2	3	158		25		6	2,275
Ohio, '29	233	556	206	1018	183	147	50	594	1368	85	652	13	49	1341		349	7	52	27,190
Okla., '29	19	174	80	136	53	2	18	217	456	52	124	6	8	551		38	7	3	10,659
Ore., 1929	37	103	36	126	19		6	140	211	27	108	2	8	126		60		1	4,931
Penn., '29	270	877	248	834	335	111	102	825	1192	131	623	14	30	1061		320	20	55	26,743
R. Isle., '29	22	83	9	66	33	11	14	67	121	32	51	1	5	62		39		18	2,408
S. C., '29	6	23	12	38	5			62	96	3	24		2	59		1			3,309
S. D., '29	25	81	22	130	6	1	1	149	138	8	68		7	271		32		1	3,990
Utah, '29	6	44	11	44	6		1	42	61	3	33	2	3	56		11			2,014
Vt., 1929	6	43	10	20	10	5	3	42	25	7	13		2	76		13			959
Wash., '29	54	138	45	203	30	7	10	297	213	36	196	2	13	195		96		6	6,845
W. Va., '29	39	117	32	107	29	2	3	133	180	19	79	2	8	257		45			4,973
Wis., '29	87	493	130	444	58	16	34	494	707	36	339	2	12	695		121	1	35	13,902
D. of C., '29	34	64	22	105	33	8	13	37	117	15	69	3	14	39		11		14	2,536
Total, '29	2264	8169	2265	8398	2500	661	691	8068	13704	1352	7355	135	559	12278	*	2925	138	1416	317.769

VERMONT NEW CAR SALES OFF 17.1%

NEW YORK, Sept. 2.—While new car registrations in Vermont showed a seasonal decline in July, as compared with June, the July total of 795, as compared with 959 for the same month a wear ago, showed a loss of only 17.1 per cent. In the first seven months the decrease was 21.1 per cent.

Good showings were made in July by several makes, including Ford and Chevrolet. The former had a gain of 27 units, while Chevrolet's decrease was only eight units, as compared with July last year. Gains were made in July over the same month in 1929 by Buick, Auburn, Chrysler, La Salle, Oakland and Studebaker.

In the first seven months gains were recorded by Auburn, Ford, Franklin, Lincoln and Marquette. A feature was the fact that three makes were tied with 1929 records. They were Graham, Oakland and Reo.

New car registrations in Vermont for July, as compared with the same month a year ago, and with June of this year, follow:—

	July 1930	July 1929	June 1930
Auburn	4	2	6
Austin	5	*	*
Buick	29	17	30
Cadillac	1	1	4
Chevrolet	154	162	238
Chrysler	35	24	50
Cord	2	*	2
De Soto	6	27	11
Dodge	17	25	33
Durant	5	11	4
Essex	28	58	51
Ford	298	271	424
Franklin	1	2	2
Graham	14	16	33
Hudson	14	35	16
Hupmobile	14	18	14
La Salle	5	1	7
Lincoln	1	1	2
Marmon	2	6	3
Marquette	3	13	8
Nash	19	43	36
Oakland	12	10	14
Oldsmobile	16	20	16
Packard	6	10	26
Peerless	..	5	1
Pierce-Arrow	1	3	4
Plymouth	30	42	63
Pontiac	17	25	35
Reo	4	7	11
Studebaker	19	13	12
Viking	..	2	..
Whippet	11	76	16
Willys	18	*	31
Willys-Knight	4	13	5
Total	795	959	1,210

*Not on market at that time.

Registrations in the first seven months, compared with the same period a year ago, follow:—

	1930	1929
Auburn	32	14
Austin	5	*
Buick	256	367
Cadillac	15	32
Chevrolet	1263	1405
Chrysler	222	240
Cord	9	*
De Soto	66	143
Dodge	180	227
Durant	39	85
Essex	303	679
Ford	2234	1774
Franklin	15	10
Graham	127	127
Hudson	118	250
Hupmobile	81	92
La Salle	28	51
Lincoln	5	3
Marmon	23	28
Marquette	51	30
Nash	166	483
Oakland	77	77
Oldsmobile	136	220
Packard	75	89
Peerless	13	26
Pierce-Arrow	12	20
Plymouth	277	369
Pontiac	176	245
Reo	37	37
Studebaker	100	221
Viking	6	10
Whippet	119	624
Willys	106	*
Willys-Knight	39	139
Miscellaneous	4	28
Total	6423	8141

*Not on market at that time.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

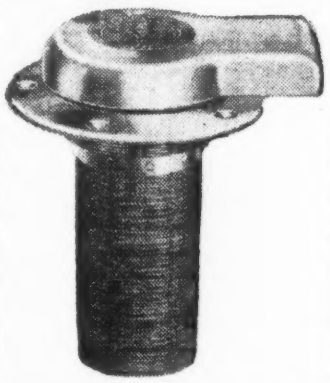
Production--Engineering--Factory-

The Aresto Co. Develops Explosion-Proof Tank Fitting

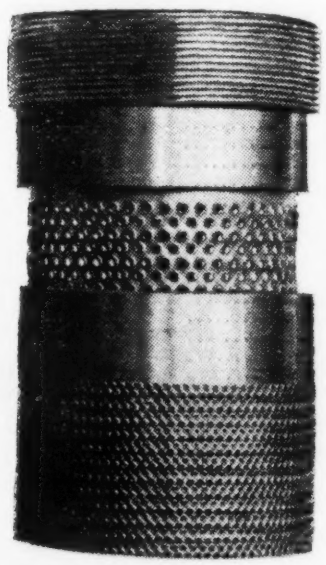
The Aresto Company, Baltimore, Md., is developing a line of explosion-proof gasoline tank fittings for motor trucks, buses and gasoline and electric railroad cars similar to those developed in the motor boat field for the United States Coast Guard.

It is claimed that the Aresto filler will prevent explosions of the gasoline tank from internal pressure, from ignition of the gases within it, and explosion of the gases in the compartment in which the tank is located.

The gasoline tank filler has incorporated a flame arrester consisting of two concentric perforated tubes which normally are located in the tank, under the filler opening. These perforations are in reality, minute nozzles of which there are 170 to the square inch in the outer tube. The total area of these openings is over thirty times the area of the filling opening.



Aresto deck plate screwed into tube which connects with gasoline tank



Side view of Aresto tank fitting

The flame arrester performs two functions; it restricts the flow of oxygen and gases and prevents flame from passing into the tank.

Flame arrester and gasoline filter of Aresto fitting with outer tube lowered to show inner tube and construction

The Aresto device has two safety valves. The self closing cover is the primary one. A torsional spring concealed in it and protected by the cover keeps it tightly closed under nomal conditions, but if a pressure is generated within the tank, the cover will open sufficiently to release the pressure, and will remain open as long as the pressure continues.-The secondary or auxiliary valve consists of a disc, concealed in and protected by the cover. This disc is held in position by a fuse which will either melt at 150 degrees Fahr. or break under a much lower pressure than is required to rupture the tank.

A. S. S. T. ORGANIZED TEN YEARS

The American Society for Steel Treating celebrates its tenth birthday on September 14. It was formed on the same date in 1920 by the merging of the Steel Treating Research Society and the American Steel Treaters' Society.

The Steel Treating Research Society was organized in Detroit in 1914 to awaken interest and to broadcast knowledge in the then young craft of heat treating. The American Steel Treaters' Society was composed originally of a number of Chicago metallurgists who had similar aims. By 1920, each organization had established several chapters and since the purposes of both societies were identical it was felt that the science of metallurgy could be served by one large organization rather than by two smaller ones.

Lieut.-Col. A. E. White, a member of both societies, took the initiative in the amalgamation of these organizations. A poll of the members was taken, which resulted in a vote of 828 in favor of the amalgamation to 34 against it. A combined convention was held in Philadelphia and the plans ratified. The American Society for Steel Treating was formed, with a total of 1,700 members. Its membership has since increased to more than 6,000.

The first exposition of metal tools and products under the society's auspices was held in Chicago in 1919, at which fifty firms exhibited their products.

The annual conventions of the A. S. S. T. have become established in the field of metals as outstanding events of their kind. They have been held each year since 1919 in one of the great metal centers. This year the society sponsors the National Metal Congress and Exposition to be held in Chicago September 22 to 26.

Past presidents of the American Society for Steel Treating are Albert E. White, 1921; Frank P. Gilligan, 1922; Tillman D. Lynch, 1923; George K. Burgess, 1924; William S. Bidle, 1925; Robert M. Bird, 1926; J. Fletcher Harper, 1927; Frederick G. Hughes, 1928; Zay Jeffries, 1929.

The present officers of the society are R. G. Guthrie, Peoples Gas Light and Coke Co., Chicago president; J. M. Watson, Hupp Motor Car Corporation, Detroit, vice-president; A. Oram Fulton, Wheelock, Lovejoy & Co., Cambridge, Mass., treasurer; W. H. Eisemann, Cleveland, secretary.

The board of directors is composed of F. T. Sisco, A. H. d'Arcambal, O. E. Harder and W. B. Coleman.

A. S. M. E. PROGRAM FOR METAL CONGRESS

The following program will be presented by the iron and steel and machine shop practice divisions of the A. S. M. E. during the national metal congress:—

Tuesday, Sept. 23, 2 p. m.

"Phenol Resinoid Molding Technique, Consideration of Engineering Factors Involved in the Replacement of Metals by Synthetic Plastics," Leon V. Quigley, Bakelite Company, New York.

"Production of Plastic Telephone Parts," A. M. Lynn, Western Electric Company, Chicago.

8 p. m.

"Flange Type Motor Mounting," Herbert Chase, McGraw-Hill Publishing Company, New York.

"Mechanical Design of Electric Motors, as Regards Standardization and Interchangeability," J. L. Browne, Westinghouse Electric and Manufacturing Company of East Pittsburgh.

Wednesday, Sept. 24, 10 a. m.

"Automatic Polishing," Robert T. Kent, Devine Bros., Utica, N. Y.

"Repair of Worn Parts by Electro Deposition of Iron," T. P. Thomas, Westinghouse Electric and Manufacturing Company, East Pittsburgh.

2 p. m.

"Case Hardening With Ammonia Gas," V. O. Homerberg and J. P. Walsted, Massachusetts Institute of Technology, Cambridge.

"Nitriding Analyses, Their Physical Properties and Adaptability," R. Sergeson and M. M. Clark, Central Alloy Steel Company, Canton, O.

Thursday, September 25, 10 a. m.

Report of anti-friction heavy duty bearing committee.

"General Design and Construction of Hot Saws for Cutting Heavy Structural Steel Sections," A. B. Pearson, Carnegie Steel Company, Munhall, Pa.

2 p. m.

"Manufacture of Large Weldless Forged Steel Pressure Vessels," J. L. Cox, Midvale Company, Philadelphia.

"Manufacture of Large Welded Pipe," Leon Cammen, consulting engineer, New York.

"Straightening of Steel by Rolling," J. Blair Sutton, Sutton Engineering Company, Pittsburgh.

Friday, September 25, 10 a. m.

"Application of Metallic Recuperators to Industrial Furnaces," G. W. Mantle, Surface Combustion Company, Pittsburgh.

"Continuous Reheating Furnaces for Rolling Mills," A. L. Culbertson, Rust Engineering Company, Pittsburgh.

"Manual Semi-Automatic Devices for the Protection Against Wind of Ore Bridges and Similar Structures," C. O. Burton, Minnesota Steel Company, Duluth, Minn.

2 p. m.

"Notes on the Production, Purification and Uses of Blast Furnace Gases," William A. Haven, Arthur G. McKee Company, Cleveland.

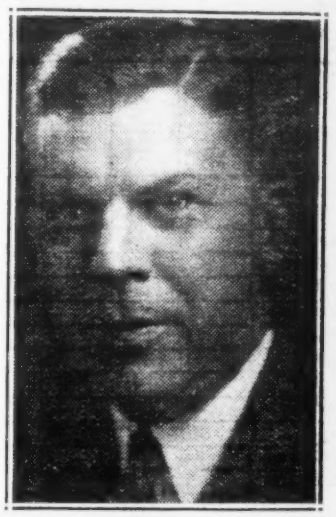
"Combustion of Gas in Blast Furnace Stoves," H. W. Paret, Jr., Swindell-Dressler Company, Pittsburgh.

S. W. MILLS, ENGINEER, PIERCE-ARROW CO., DIES

Buffalo, N. Y., Sept. 2.—Stanley W. Mills, automotive engineer, associated with the Pierce-Arrow Motor Car Company, died at his home here after a protracted illness of several months. Mr. Mills, who was born in England in 1882, came to the United States in early manhood. In 1917 he became affiliated with Pierce-Arrow as assistant chief truck engineer. Within a year he was promoted to chief truck engineer, a position he held until 1929. He then became passenger car chassis engineer, serving in this capacity until the time of his death.

Meet the Engineers

TO acquaint its readers with the important, but unsung, members of the automotive fraternity—the engineers who design and build the nation's cars—Automotive Daily News is publishing a series of brief biographies of the engineers of companies producing automobiles, automotive equipment, parts and accessories. These biographies will cover the training and experience of leading engineers and their outstanding contributions to the progress of our industry.



R. B. TEMPLEMAN, chief body engineer and executive engineer of Stutz Motor Car Company of America Inc., began his automotive career in the drafting room of the Thomas B. Jeffery Company in 1910, and did general drafting on passenger cars and trucks there until 1916, when he joined the Jordan Motor Car Company in Cleveland.

During the war period he was first lieutenant in the Motor Transport Corps, and ultimately in charge of the Cleveland office of the Engineering Division. Upon his discharge from the service he rejoined the Jordan Company as chief dreftsman on chassis and body work, and subsequently became assistant engineer in charge of body work.

After eleven years with the Jordan Company he associated himself as sales engineer with the Murray Corporation of America, but a year later resigned to resume technical work as body engineer at the Detroit plant of the Edward G. Budd Manufacturing Company, where he remained until he joined the Stutz Motor Car Company.

European Editors Comment on Front Drive

THAT the adoption of the front drive principle to automobiles will be extended is the prediction of several prominent automobile technical editors of European publications.

This is especially noteworthy, says N. E. McDarby, director of sales for Auburn, now that the Cord has been in the hands of several thousand motorists for nearly a year and approximately 15,000,000 road miles have been delivered in service. Reference is made in the articles to the winning of the 500-mile Decoration Day race at Indianapolis this year by Billy Arnold in a front drive car and the remarkable performance of this car.

The London Graphic, an authoritatively edited paper, says: "There are a good many among the competent technical authorities who hold that the car of the future will have a front drive. We are inclined to agree with them, because it is certainly desirable to get all your mechanical matters into one light and rigid unit, and that so long as people like to feel that there is something in front of them to take the worst of the "biff" the forward position of this unit is scarcely avoidable.

"Incidentally, the Cord is unique of its kind in having an immensely strong and rigid front axle in contradistinction to the practice which has been followed in all other front drive cars, namely of providing independent suspension for each front wheel.

"Another feature of the Cord is its very low build, which is consequent upon the fact that the whole chassis frame behind the power unit is concerned not with propulsion, but merely with the support of body work. It is not without interest to note that the general layout of the front drive car is analogous to that of the airplane. We will not here go into technical arguments, but it is unquestionable that the principles of stability upon the road have something in common with those of stability in the air. A proper distribution of weight can, then, make for a freedom from any tendency to skid, to roll, or to pitch. Looked at from this angle the front drive car would seem to have very great possibilities."

The technical editor of the Light Car of London says:—

"One hears increasingly that the front drive car is the coming thing. One of the American Cord cars at a recent meeting at Brooklands certainly looked convincing and attractive.

"The principal attraction of the front drive, of course, is that it eliminates a long propeller shaft, thus tending to cut down vibration, and permits the entire power plant and transmission, except for the final drive shafts, to be built as a single unit. More appealing, however, from the commercial standpoint, is that the front drive allows cars to be built very low to the ground. Some time ago I was discussing front drive with a well-known racing man who said that it had a big appeal on the score of road holding and stability. He illustrated his point, namely, that the weight of the car should be concentrated in front by pointing out that if you tie a stone in one corner of a handkerchief and throw it the stone will always lead the way, with the handkerchief trailing behind."

The technical editor of Motor, also a London publication, writes:—

"Just as four-wheel brakes have proved to be the outstanding mechanical innovation for the post-war decade, 1919-1929, so does it appear that the front wheel drive may well constitute the chief feature in chassis development during the next few years."

The editor then gives a comprehensive history of the front drive car and a record of its performance in Europe and America, and concludes: First, that front wheel drive provides certain definite advantages not obtainable with a rear drive; second, that there is no insurmountable difficulty in providing a thoroughly reliable front drive mechanism, and, third, that front wheel drive has a definite appeal to the public as being a new and interesting development worthy of special attention. Consequently, he says, there is little doubt that for 1931 the range of cars of this type will be extended quite materially.

NORTHWESTERN OFFERS NEW ARC WELDER

The Northwestern Manufacturing Company, Milwaukee, Wis., is now offering a new 200 ampere electric motor or gasoline engine driven arc welder.

The unit, which is sold under the trade name "Hansen," is manufactured in both portable and stationary types. The unit is of compact construction. It can be utilized for hand or automatic welding.

Equipment - - - Development

Rubber Chemists Will Meet In Cincinnati

In conjunction with the eightieth annual meeting of the American Chemical Society, September 8-12, the rubber division will hold its meetings in Cincinnati. Two days of this period will be given over to topics of interest to those engaged in the rubber industry.

The rubber division will hold its meetings in the library of the University of Cincinnati.

The program of the rubber division is given below.

PROGRAM OF RUBBER DIVISION

Stanley Krall, Chairman.
H. E. Simmons, Secretary-Treasurer.

Wednesday Morning, September 10

9.00—W. B. Wiegand. Notes on the Carbon Flame.

9.30—H. A. Winkelmann and E. G. Croakman. Water Absorption of Rubber Compounds.

10.00—D. J. Beaver and J. W. Mackay. Reinforcing Action of Pigment Mixtures on Rubber Compounds.

10.30—A. M. Finely and M. J. DeFrance. The Effect of Increasing Gas Black Loading on Flex Fatigue Resistance as Determined on the Goodyear Flexing Machine.

11.00—Paul C. Jones and David Craig. The Behavior of Antioxidants in Rubber Stocks Containing Copper.

11.30—J. McGavack and J. S. Rumbold. The Determination of the pH of Ammonia Latex by (1) A Colorimetric Method; (2) The Glass Electrode.

11.55—Henry F. Palmer and George W. Miller. Determination of Alkalinity of Reclaimed Rubber.

Thursday Morning, September 11

2.00—J. H. Howey. Hard Spots in Vulcanized Rubber Compounds.

2.30—E. Karrer. The Modified Balance for Approximate and Quick Weighing.

3.00—George J. Albertoni. New Autographic Rubber Testing Machine.

3.30—S. H. Hahn and E. O. Dieterich. Graphical Tensile Testing Machine for Rubber Threads.

4.00—A. F. Hardman, W. L. MacKinnon and S. M. Jones. Kelly Abrasion Machine.

4.30—A. A. Somerville. Report of Physical Testing Committee.

5.00—Business Meeting.

Stout Discusses the Airplane Of the Future

"Normal requirements demand a complete revision of airplane engineering within the next two years," according to William B. Stout, president of the Stout Engineering Laboratories, Inc., speaking before the Society of Automotive Engineers at their recent meeting held in Chicago.

"The plane of the future must carry more passengers than our present plane, not only in actual number, but more passengers per horse power, per pound of fuel, per square foot of wing or pound of structural area. Economies in equipment are the solution of money making for air transport lines, and it is the air transport which will lead the way in engineering development of all types. Cruising speeds must very shortly approach 200 miles per hour for even our largest transports. Comforts and luxuries must be added far beyond those furnished on any other transportation. Landing speeds must be decreased. The plane of today is safe enough once it is given the proper instrumentation.

"Present British types of planes flying passengers across the Channel cruise about 85 to 90 miles per hour, and the hours in the air per day are few, the crews available are large. Planes flying in this country on air lines cruise 100 to 105 miles per hour. Planes in this country have been doing from two and one-half to six hours per day in the air per ship. The average air line in the United States, I believe, keeps its planes in the air about three hours per day. The rest of the time is consumed by idle planes on the ground for emergencies, idle planes in the shops for repairs and on the ground for maintenance work. If motor bus companies were operating in this fashion they would go broke in a month.

"Our planes on the Stout Air Lines between Detroit and Cleveland and Detroit and Chicago for the entire fleet, including those on the ground and in the shop, are in the air, in service, on an average of six hours per day. This is far too low a figure and yet it is, I believe, higher than any other lines flying planes. Planes to pay a dividend must be able to be in the air eventually eighteen hours out of every twenty-four. We might as well design structural ability enough for such a service. This will have to include quick detachable power plants and other units, but it is well within reason.

"We cover 3,000 miles a day in our little air line project. The greatest element of cost in running these planes is engine depreciation per hour. We have figured very closely on our costs and the elements that go to make up these costs, and most of them are divided by the number of minutes the plane is in the air on a given run. We have recently considerably revised the detail of our Ford planes. We recently took one of the new Ford planes with the cowled engines, inclosed wheels and revised propeller location on a test on our Chicago run from Detroit. We used one of our planes which has had 200,000 miles on the air line, equipped with three Wasp engines and with full passenger load on its regular run. For the same run we loaded up a new Ford plane of the speed type with sand equal to the load carried on the air line ship. We left the airport at the same moment, both turning engines at 1,700 r. p. m. for the trip. The new job beat the old job to Chicago by twenty-six minutes.

"We make eight trips per day between Chicago and Detroit, and eight trips between Detroit and Cleveland. This would mean a saving almost of seven hours per day, or time in the air for these trimotored planes, or twenty-one hours of engine depreciation. This, figured at $4 per hour, amounts in engines alone to $84 per day, a saving in engine depreciation. At the same time we have saved eleven hours in the air, fifty gallons per hour, or 550 gallons, with gasoline at 30 cents a gallon—making $165. We have saved the pilot's time and have added as well the possibility of two or three more trips a day with the same plane. Furthermore, added to this is the fact we have saved one-half hour each single trip, which therefore makes the trip more valuable to the customer and is even more important than our own saving. This visualizes to you at once the extreme value of speed in the air line plane. Because people have been created a certain size we must make the flying wing of the plane big enough so that the wing itself can be six feet thick so that the people can move about. The ideal airplane is a wing alone with everything housed within it. We all believe in the flying wing, but no one has devised the structural and aerodynamic combination that will do the trick. There are many things, however, that we can do with the extreme tapered wing, and I believe it must be included in the future plane.

"As to materials, there is more and more inclination to stainless steel. Airplanes eventually will undoubtedly be of metal from the standpoint of maintenance, although privately owned ships may be cloth covered, perhaps, because of their few hours of operation.

"A new landing gear is of great importance. We must arrange a simpler method. The wheels for landing an airplane should run longitudinally, like a skid or skids, if the plane is large enough to require more than one, with some sort of outrigger wheels and a braking and steering combination. I have yet to see a landing gear much better than the old original three-wheeled Curtiss.

"There must be an entire enclosure of power plant. Carburetion is as yet a long way from right, and fuel injection is undoubtedly coming whether with gasoline or oil. Something also might be developed if some one started a serious line of experiment on a pusher, tail-first machine.

"We have many disadvantages in our present day structure other than the loss of drag on the fuselage right behind the pilot. The noise and gas from the engines blow back through the passenger compartment and the vibration is carried down through the fuselage. Vision forward is hindered by the power plant. No matter what plane you build today or how you construct it, the propeller is still a problem. No matter where you put it it is in the wrong place. It is up to the engineers to get busy. The wizard of them all when it comes to flying is the four-winged dragon fly, which will follow your bait through the air on a fish line as fast as you throw it, stop, stand still as the hook hits the water, fly back again, stand still in the air, or fly backwards while waiting to catch up with the bait on your next swing."

Oil Man's Calendar

SEPTEMBER

2- 4—**Toronto, Ont.**, North American Gas Tax Conference.

4- 5—**Galveston, Texas**, A. P. I. Division of Production, Southwestern District, Buccaneer Hotel.

5 —**New Kensington, Pa.**, Test of Aluminum Alloy Tank Truck Tanks.

8-12—**Cincinnati, Ohio**, American Chemical Society, Hotel Gibson.

17 —**Columbus, Ohio**, Ohio Petroleum Marketers Association, Deshler-Wallick.

17-19—**Atlantic City, N. J.**, National Petroleum Association, Hotel Traymore.

29-Oct. 4—**Pittsburgh, Pa.**, Petroleum Section, National Safety Council.

OCTOBER

2 —**Tulsa, Okla.**, General Committees, A. P. I. Divisions of of Production and Marketing.

3 —**Tulsa, Okla.**, Board of Directors, A. P. I., Mayo Hotel.
Tulsa, Okla., General Committee, A. P. I. Division of Refining.

4-11—**Tulsa, Okla.**, International Petroleum Exposition and Congress.

6- 8—**Tulsa, Okla.**, National Petroleum Meeting, American Society of Mechanical Engineers.

6-11—**Washington, D. C.**, Sixth International Road Congress. **Washington, D. C.**, Exhibition, American Roadbuilders Association.

13-17—**Atlantic City, N. J.**, American Gas Association, Auditorium.

14-16—**Kansas City, Mo.**, Convention, Big Four State Jobbers.

16-25—**London, England**, Olympia Motor Show.

20-22—**St. Louis, Mo.**, Petroleum Refiners Divisions, National Association of Credit Men.

22-24—**Pittsburgh, Pa.**, Transportation Meeting, Society of Automotive Engineers.

Lacquers Revolutionized Automobile Manufacturing

The changes in automobile finishes and their methods of application have savored more of revolution than evolution, according to J. M. Callahan, E. I. du Pont de Nemours & Co., during the Detroit meeting of the American Society for Testing Materials.

Comparisons of the production finishing methods of 1922 with those of 1929 show the tremendous changes which have occurred in body finishing methods.

In 1922:

Number of operations 22
Operating time (days) .....4 to 9
Operating space (300 bodies per day) .....100,000 square feet
Rejects (painting defects) 15 to 20%

In 1929:

Number of operations 19
Operating time (days) 1
Operating space (450 bodies per day) .....60,000 square feet
Rejects (painting defects) 1%

The time cycle of operations has been shortened so that a body can now be taken from the bare steel to the finished trimmed job in approximately ten hours. The number of baking operations has been decreased, and particularly in the color coats the temperature of baking has been lessened. The moving chain assembly method of operation has been applied to the whole operation of finishing, with the resultant economy in space, labor for handling, etc.

Perhaps of greatest interest is that actually less floor space is now required compared with 1922, although production has been nearly doubled. The saving of time in process has resulted in a large cut in car inventory during manufacturing, with a resultant capitalization decrease.

Lacquer finishing methods permitted body design engineers to introduce into manufacture new ideas of line and color. The almost universal adoption of closed car bodies would have been practically impossible without the availability of the lacquers now being used.

Within the past year, the finish chemist has developed new undercoats which may supplant the older types. These undercoats are based on synthetic resins, produced by the interaction of polyhydric alcohols and mono and dibasic acids. These resins, known as glyptals, were first commercially developed in the laboratories of the General Electric Company, and adapted for undercoats by the du Pont Company.

The present lacquer finish for automobile bodies appears to be thoroughly practical, and there appears to be no product in sight which has a reasonable possibility of supplanting it. However, research work in the field of synthetic colloids which is being studied by a number of prominent industrial concerns may result in a product having equivalent properties of the present-day cellulose nitrate lacquers but based on a new type of colloid. If an economic advantage can be obtained a substitution undoubtedly will occur.

The field of corrosion resistant alloys offers considerable interest, and it is not too radical, perhaps, to speculate that alloys may be produced which will require no finishing other than a burnishing operation.

The finishing of fenders has not kept pace with that of the body of the car, but with the activities of research workers focused on this problem, an improvement in this field is anticipated.

Here Is a Ford Truck Fleet That Has Written Itself Off

By ROY GEORGE

THE seventeen model T's comprising the delivery fleet of the Constable Ice and Fuel Company, Phoenix, Ariz., written off the books as an investment five years ago, continue to give complete service on the mere charge of up-keep.

The oldest car dates back to the days before Henry Ford manufactured a truck, having the truck frame hung to a touring car chassis; the newest of the fleet bears the date 1923; the average is about 1920. In spite of the fact that every one of these trucks has paid itself out several years ago, the average replacement charge for the past year was only $16.35. This included an entire new block for three and rebore of four others, with new pistons and crankshaft.

Walter H. Donnelly, mechanic, checks the cars regularly as they are serviced at the plant. Once a year every car is overhauled, front and back. "There's nothing to it," he says. "They're good forever. So's a pair of pants if you put in a new front and back every time the old parts wear out."

Every morning the drivers take on ten 300-pound cakes of ice and start out on their routes before 7 o'clock. The cars are without starters, lights or speedometers. From 7 till noon the engines run continuously as the little bugs nose their way around the town of Phoenix and its environs. After the lunch hour they are cranked up again and are expected to continue until all deliveries are made, and then get back to the yard before dark. Mileage has no place in the record. Ice delivery is all that counts, and the drivers have regularly appointed times and places to meet the big mother trucks that start out in the middle of the morning with fresh supplies. The motors run continuously.

A check of the daily service records for the month showed five cars, taken at random, to be averaging a quart of oil every other day. The figures on oil were almost uniform, running 1—0—1—0, down through the daily report, showing rather conclusively that the cars were all up to pitch. "Old pans account for some waste," says Mr. Donnelly. "There's no reason why a car should use any excessive amount of oil just because it's carrying a little age. The bearings are not old."

That seems to be the secret of the fleet's unusual economy and efficiency. The essential parts are not old and the drivers have been trained to a sense of pride in the performance of their motors. Once in a while Mr. Donnelly lines up a dozen or so of the trucks and calls the men out front to listen to the engines idling. Under these conditions it is comparatively easy to detect pecularities, and the drivers know the pecularities of the various old stagers.

Every car is referred to by number, and it is easy to detect the note of pride in reference to "Old Number 7," or "That 4-Ball." Any tendency on the part of a new driver to treat one of these old cars as an old wreck is quickly checked. The spirit of the fleet is like that about a roundhouse, where old-time railroad engineers are reputed to groom their charges with something like real affection.

"Boy, I've driven No. 9 for nine years," confided one driver, "and you just plumb can't make her boil."

To replace the Constable fleet with new cars would cost upward of $20,000. The interest alone on this sum would amount to more than five times the cost of replacement. The company's not asking for the answer. It's got the book with the answers in.

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